

LIGHTING

EQUIPMENT NEWS

MARCH 1989

CIBSE joins Joint Board

The Chartered Institution of Building Services Engineers has joined the Joint Board of Moderators formed by ICE and the ISE to modernise and accredit civil and structural engineering degree courses. The Board influences the content of civil and structural engineering courses and is now changing its composition to embrace CIBSE which accredits degrees in building services engineering.

The Board has increased numerically from 18 to 26 members and consists of the Chairman, ten joint ICE/IStructE nominees and five nominees each from ICE, IStructE and CIBSE. Teams visiting academic organisations will be composed of two academics and two practising engineers, in line with Engineering Council policies.

"Joining the new Joint Board will enable the Institution to widen its influence in this most important area of accreditation of honours degree courses in Building Services Engineering," stressed Doug Balmforth, CIBSE's Head of Qualifications and Membership.

Wanted — new products

The Design Museum is opening at Butlers Wharf in London in July. It will include a review of new products which will be a showcase for stylistic and technical innovation.

Manufacturers and designers interested in displaying new work should contact Paul Thompson, the museum's design review manager, at Butlers Wharf, Shad Thames, London SE1 2YD, telephone 01-403 6933.

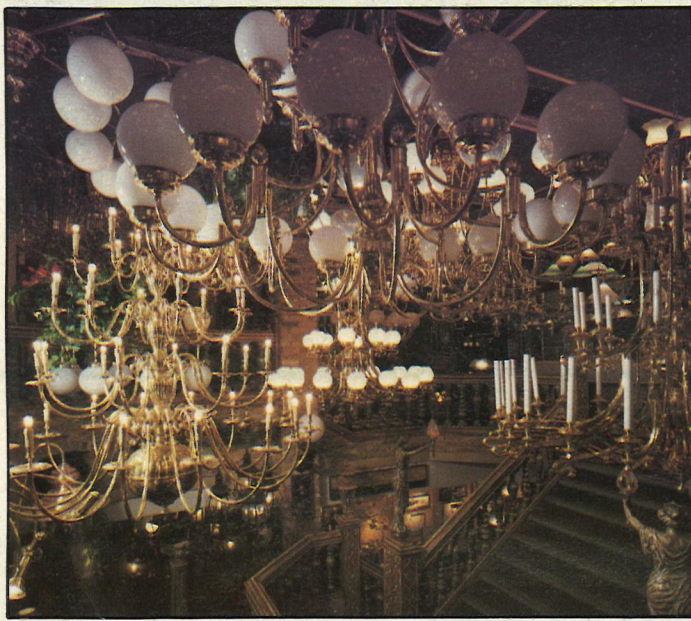
The purpose of the review is to provide designers, manufacturers and the public with an up-to-the-minute view of new trends in product design.

Information sheets will be provided for visitors and an annual publication will be produced.

If products have been launched on the UK market they should be no more than three months old. Those that have already been launched overseas and are not intended for the UK market will also feature in the review.

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Chandeliers over the grand staircase.

Where big is beautiful



Stained glass pendants in a well between floors.

To the ripple of harps and the cascade of water, a huge lighting showroom was recently declared open. The occasion also had plenty of light and colour from the thousands of lighting fittings on show.

Christopher Wray's refurbished Lighting Emporium in London's Chelsea was the scene of this splendid event.

The range of lighting on show has been extended and now covers styles from Regency to the present day. To simplify selection, the showroom has been divided into areas, each featuring a particular lighting type.

Among the collections on the ground floor are Tiffany lights, low voltage tungsten halogen spotlights on track, downlights, traditional style lighting in carved pickled pine, and crystal chandeliers.

A contract lighting section, on the upper mezzanine floor, offers ideas for restaurants, clubs, hotels and pubs.

There is also an area where customers can experiment with the effect of different spotlights and other fittings.

A sweeping staircase — originally from Bentalls department

store — leads down through the centre of the showroom. At the point where the staircase divides, the visitor sees a waterfall which tumbles into a pool below the stairs. This provides the opportunity to display underwater, sealed lighting.

The lower sales floor includes areas devoted to garden lighting, table lamps made from huge converted tobacco canisters, blue and white Chinese vase table lamps, and a display of coloured glass lights made of paté de verre.

A corner of this floor holds stocks of many different light sources, including unusual types such as E10 lamps. Period-style decorative finishing plates made from original moulds are also on sale here.

Christopher Wray's lamp workshop is now located in this building with an extensive supply of glass chimneys, burners, wicks etc. for oil lamps.

The enthusiasm of the staff and their knowledge of the style of lighting they are selling is particularly noticeable in what must be the largest decorative lighting showroom in Britain.

Emess bid for JSB Electrical

Emess plc is to take over JSB Electrical, manufacturers of battery powered emergency lighting systems and fire detection equipment, subject to the approval of Emess shareholders to be sought at an extraordinary general meeting.

Emess has made an offer which values each JSB share at 404.2 pence, a premium of 34% over the market price on 2 February, the last trading day before the announcement, and the directors of JSB will unanimously recommend shareholders to accept the offer.

To date, Emess has received irrevocable undertakings from the chairman and three other directors to accept the offer in respect of

approximately 53% of JSB's issued share capital.

In lieu of some or all of the Emess ordinary shares due under the offer JSB shareholders may opt to receive either cash or Emess guaranteed variable rate loan notes dated 1990/93.

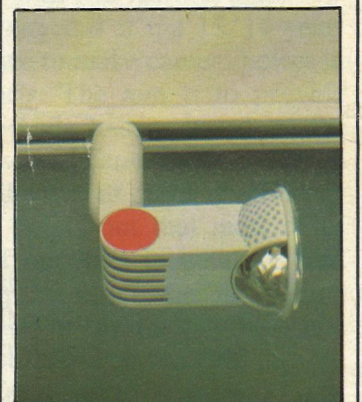
Emess is the parent of a group of companies which aims to become a leading world supplier of lighting and associated electrical equipment. Shares first obtained a Stock Exchange listing in 1980, since when the group has expanded significantly both as a result of organic growth and by acquisition.

Commercial lighting activities in the UK and Denmark are centred on the Marlin Lighting subsidiary;

and decorative lighting activities include five UK based companies and a US company, the Alsy Corporation, acquired in 1988 which manufactures lampshades and table lamps. Emess also has a controlling stake in Brillantleuchten AG of West Germany which manufactures quality decorative lighting for the European market.

The purpose of the acquisition is to provide Emess with an opportunity to expand its range of commercial lighting and electrical products, which will complement Emess's own growing range of emergency lighting.

Thorn wins German award



Track mounted version of Aria, Thorn's new generation range of low voltage tungsten halogen luminaires.

Thorn's new Aria range of low voltage tungsten halogen luminaires has won a 1988 Die Gute Industrieform award.

The luminaires, designed by Kenneth Grange of Pentagram, accept the latest sealed beam 50mm and 35mm Lightstream lamps. The new luminaires will be on display at Hanover in both surface and track mounted versions, and as luminaires operating with integral electronic transformers.



Some 1200 special extruded aluminium lanterns light the tunnel linking Devon and Cornwall on the A38 bypass at Saltash.

The 409 metre long tunnel has a single three lane carriageway 13 metres wide with tidal traffic flow controlled by a microcomputer installed in the Tamar Bridge Administration building.

The tunnel lanterns, supplied by GEC streetlighting, house either Osram 58W 1.5 krypton filled energy-saving fluorescent tubes 180W SOX or 131W SOX-E lamps which operate automatically in six stages depending upon external lighting levels.

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Reader Service No. 4

NEW PRODUCTS



Gold trimmed lamps

New Traditionalism is one of the ranges of table lamps recently introduced by ETD Lighting Ltd under its Cresswell Elite brand name.

The richly coloured ceramic

bases are in four shapes decorated with stems of bamboo in gold leaf. They are teamed with a choice of lampshades in different shapes, plain or pleated.

Reader Service No. 151

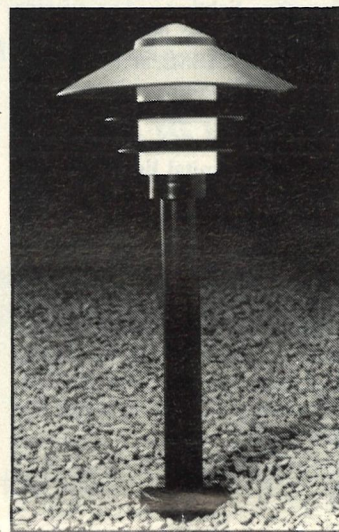
Decorative garden lighting

A low voltage garden lighting system called Malibu is available from Besa Lighting Ltd.

There are two styles of Tier lights (illustrated) for drives, patios and around pools; the standard Malibu floodlight, shrouded to prevent glare, for adding decorative light to trees, shrubbery or garden features, and a rectangular, more powerful floodlight.

Transformers, cable and coloured lenses are also available.

Reader Service No. 152



Fluorescent range offers a choice

Modulux MX series of recessed fluorescent luminaires from Crompton Parkinson Ltd is designed to provide high performance lighting.

The series offers a choice of three prismatic controllers, a diffuser and three high efficiency louvred metal reflectors.

These meet the lighting requirements of many general and private offices, computer suites, reception areas, restaurants and other commercial interiors.

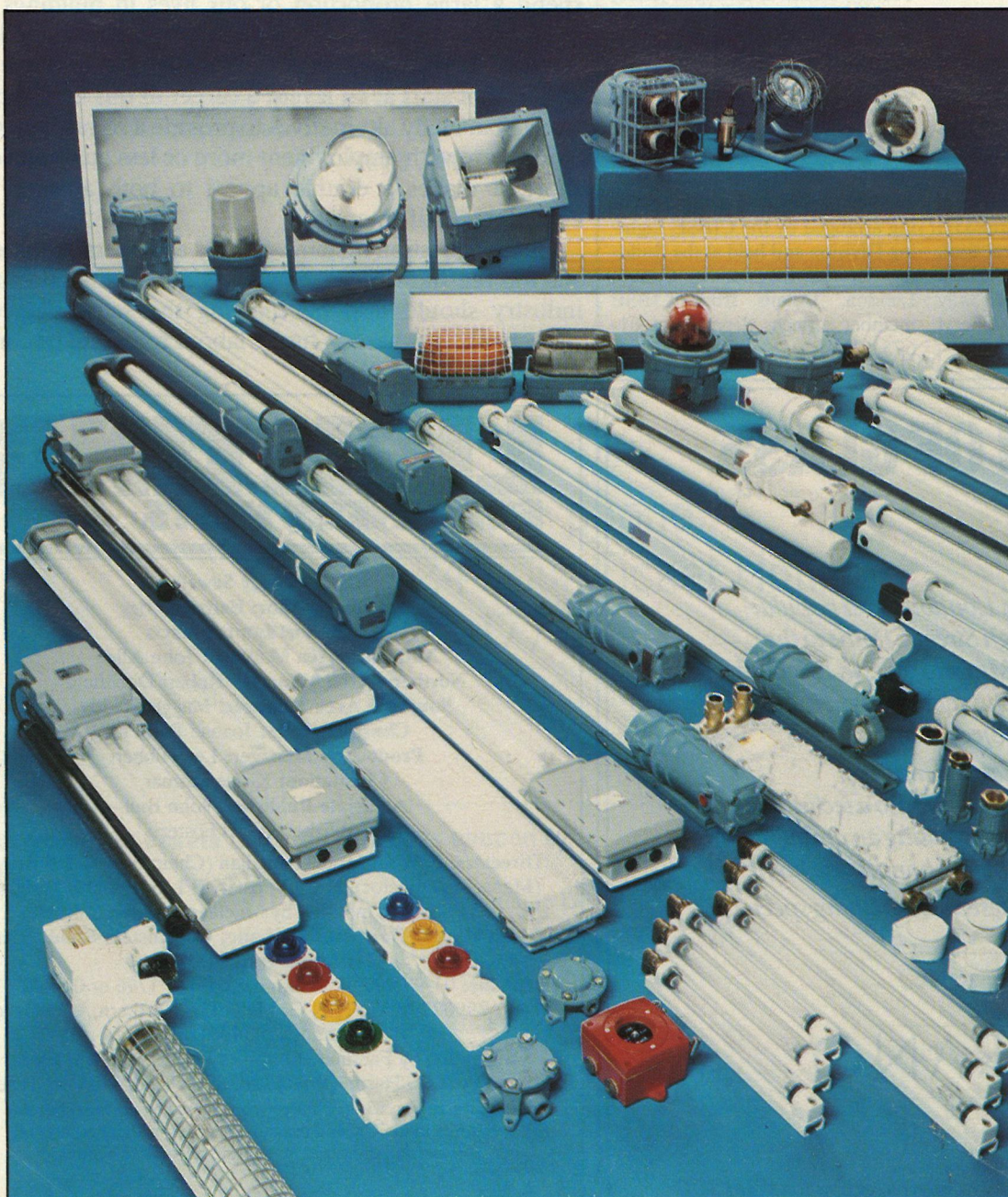
The luminaires are available in draw-up or lay-in format, with alternative trim arrangements for exposed or concealed track suspended ceiling systems.

Housings can be selected to suit 300mm or 600mm ceiling modules, in lengths of 600, 1200, 1500 or 1800mm. Combined side and end bearer brackets are built into all housings.

Electronic start is standard, with the option of either switch start or high frequency ballast. Selective switching can be provided for three- and four-lamp versions, to allow reduced illuminance on an overall installation or on selected luminaires, to save energy.

A built-in emergency lighting option is available throughout the range. Reader Service No. 153

For more information on any of the products listed above, circle the enquiry number on the free reader reply service card.



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LIGHTING

Reader Service No. 5

Bathroom lights



Marlin Lighting's hand blown glass fittings in the Limburg range enable a luminaire to be selected for any bathroom without having to compromise on either safety or design.

The range includes a wide choice of glassware, shapes and finishes ranging from simple wall or ceiling mounted products to multiple

fittings for lighting mirrors.

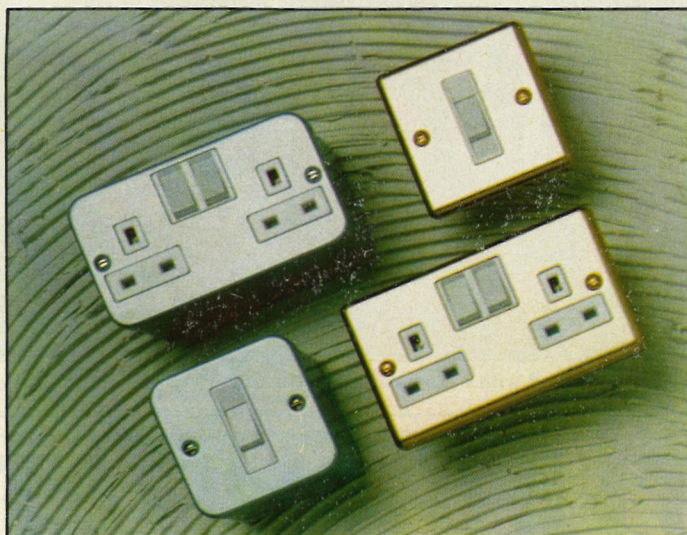
Fixing brackets are of synthetic resin for maximum electrical safety and are available in matching bronze or matt white, or in contrasting chromium or 24-carat gold plate. The luminaires are double insulated and ingress protection rated IP44.

Reader Service No. 159

Electrical accessories for industry

A new generation of metal clad lighting switches, control switches, sockets, blanking plates and steel boxes has been introduced by Tenby Electrical. They are stated to be even more robust, scratch resistant and proof against damp than their predecessors. They also lend themselves to a neater terminal layout.

The phosphate-coated steel bodies of the accessories are given a very tough epoxy resin coating which provides exceptional protection against the knocks and scratches that are unavoidable in an industrial environment.



At the same time, the trim, compact design of the units makes them suitable for domestic settings such as garages, barbeque and patio areas.

The switches can be mounted in configurations of one to six gangs, offering a cost effective multi-switch facility.

Reader Service No. 160

Luminaires give diffused light

A circular luminaire for ceiling or wall mounting is available in two sizes from Artemide GB Ltd. Made by Luceplan, Italy, it gives diffused general lighting.

Called Trama, the 640mm diameter model accepts either three compact fluorescent, three GLS or three tungsten halogen lamps, while the 500mm diameter version uses three spherical incandescent lamps.

The housing is aluminium, either natural colour or finished black.

Reader Service No. 161

Slender LV task light

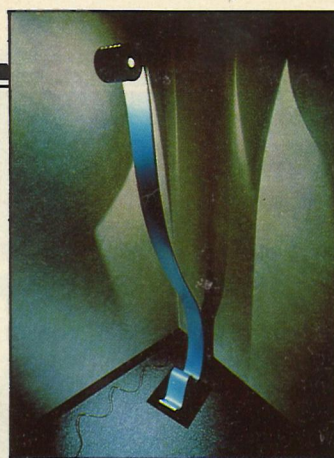
Another low voltage model has been added to the range of task lights by Anglepoise Lighting Ltd.

Based on the company's model 98, this version uses a 20W 12V tungsten halogen lamp with an axial filament which gives a concentrated light just where it is needed.

The adjustable task light can be desk or partition mounted and there is a choice of brackets.

Reader Service No. 162

For more information on any of the products listed, circle the enquiry number on the free reader reply service card.



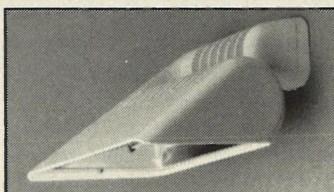
Floor standard is ribbon of light

A low voltage, floor standing light made of glass reinforced plastic has copper ribbon embedded in it to carry the current from the transformer in the base to the two 20W M32 tungsten halogen lamps.

Height of the luminaire, which is called Nastro (Italian for ribbon), is 1800mm.

Made by Memphis, Milan, it was designed by British designer Gary Morga and is available in the UK from Artemide GB Ltd.

Reader Service No. 163



Versatile spotlight

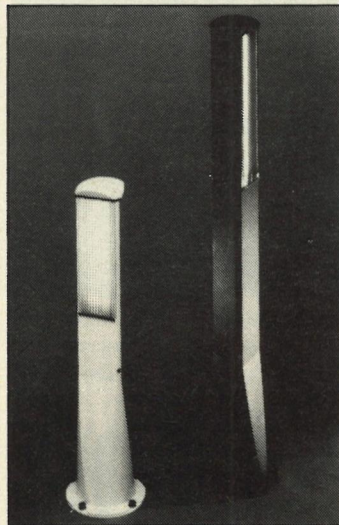
Puma is a competitively priced spotlight that uses either a 300W or 500W mains voltage, linear tungsten halogen lamp. It has been launched by Crompton Parkinson Ltd for indoor display work.

This spotlight can be either ceiling or wall mounted, or used in conjunction with lighting track.

Reader Service No. 164

Range of bollard lights

Path is a series of lighting bollards made of diecast aluminium and polycarbonate. They are available in two heights, 810mm and 1210mm, in either black or white.

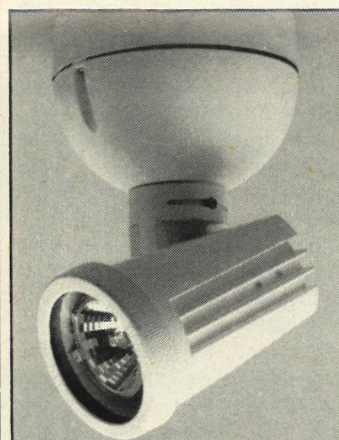


One version gives light in one direction only, while another projects light in three directions. They use linear compact fluorescent lamps.

Made by Guzzini, these bollards are distributed in the UK by Forma Lighting Ltd.

Reader Service No. 165

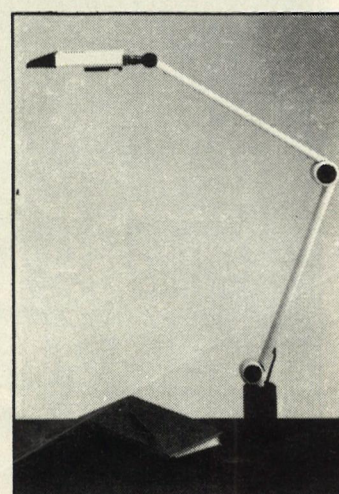
Low voltage outdoor floodlight



A new shape in outdoor floodlights is a low voltage model called Jaguar. Introduced by Crompton Parkinson Ltd it is particularly suitable for precinct, garden, sign and security lighting.

It uses either a 50W 12V tungsten halogen dichroic lamp, or an M32 tungsten halogen lamp. A transformer is either incorporated in the base or remotely mounted.

Reader Service No. 166



LIF LINE

Public lighting — onus on whom?

Within our own companies, we know that somebody has to be made responsible for each area of operation. If not, important matters fall between stools, perhaps quality suffers, and systems maintenance can come a cropper.

It is not surprising, therefore, that since 1966, when the Local Government Act was passed, 'public lighting' seems to have been neglected in certain areas. Look around in almost any part of the country and you'll find footpaths which are totally unlit, and 30-year-old lighting columns crumbling with age. The reason for this sorry state of affairs seems to be that everybody and nobody is financially responsible for the maintenance and repair of public lighting. This appears to be particularly the case in rural areas where, not surprisingly, night-time crime is as much on the increase as in the cities.

The lines of responsibility are so complex, one can never be absolutely sure of understanding them. Most district councils have responsibility for providing and maintaining a level of lighting known as roadway lighting, whilst parish councils provide a level of lighting known as footway lighting. The terms 'roadway' and 'footway' are used to describe the type of lighting, not the route that is being lit. Therefore, the main highways through a district may have lighting to 'footway' standard, and the small estates may have lighting to 'roadway' standard.

Let an instance raised at the launch of the British Parliamentary Lighting Group video 'Out of Darkness' last May serve as an example: "A roadway scheme, belonging to the Highway Authority, exists on a class B road within the built-up area of a town. Further development, including a swimming pool, has taken place beyond the limits of the lighting scheme. Following demands from residents, the district council proposed to extend the lighting to cover the development, but the highway authority was unable to give permission because, firstly, a footway scheme was not up to the standard needed for this class of road, particularly because it was already partly lit to roadway standard, and secondly, a roadway standard scheme could not be permitted because it would have to be adopted by the highway authority and their maintenance budget could not accept additional expenditure."

The position is further complicated by the fact that the local authority has to go cap-in-hand to a higher authority for the money to spend on its public lighting, and the higher authority will almost always say no.

The problem highlighted by this example was recognised by David Trippier, Parliamentary Under Secretary of State for the Environment, when it was brought to his attention at the video launch and, to give him his due, he did agree to look into the matter, while pointing out that it would take a Cabinet decision to bring some sense into this crazy aspect of local authority administration.

Whilst this may be so, the Department of the Environment could help matters by making it clear that if a parish council appealed to the minister to override a district council's rejection of its application to install or upgrade its public lighting, then the minister would support the parish council. This would then doubtless encourage the parish councils to use more public lighting as a crime deterrent; but ideally the parish councils should be free of the bonds imposed upon them by the district councils so that they might provide and maintain the standard of public lighting on everything, other than trunk roads, that their ratepayers want.

Good lighting of footpaths and B roads could then be as effective a weapon against night-time crime in the shires as it is increasingly seen to be in the inner cities.

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A view of Canute's Pavilion shopping centre, Southampton.

Lighting for shopping

In this issue, we consider the question of retail lighting from two angles, firstly shopping centres and then display lighting in shop windows.

Separating vehicular traffic from shoppers has been a distinct trend since the 1960s when high streets in a number of Britain's towns and cities were closed to normal traffic, the roadways were embellished with tubs of flowers and shrubs, often some decorative street lighting was added, and pedestrians had the strange experience of being able to wander in safety down the middle of their main shopping thoroughfare.

By the 1970s, the idea of converted pedestrian shopping streets, and even specially designed, open air shopping plazas, was giving way to purpose-built covered shopping centres with completely different lighting requirements for the general circulation areas.

Brent Cross in London was one of the first of these centres, using high quality materials and finishes and aiming to set a standard that would discourage vandalism.

There is still an extensive building programme of shopping centres in Britain. Derek Phillips, a lighting designer who has been involved in such centres in the UK and abroad, estimates that 30 to 40 are under construction or planned at the present time.

Moreover, some of the early ones are now being refurbished, not only to give a change of decor but often to enlarge them.

The latest centres all have themes, often linked to local history or geography, and a lively atmosphere is an important part of the formula, which, of course, is where lighting can make a major contribution.

Glasgow

One recently completed shopping centre is Princes Square, Buchanan Street, Glasgow, which was designed to provide entertainment as well as shopping and eating facilities.

The aim was to create a building of architectural merit to attract the best specialist retailers in the UK and provide maximum attraction to shoppers.

It was essential not only to make the centre attractive during daylight hours, but also in the late afternoons and evenings when shops would continue to trade and performances would be staged to entertain customers in wine bars, pubs and restaurants.

The lighting system was to be sufficiently flexible to meet the needs not only of the centre management but of those who would hire the building for award ceremonies, conventions, parties and fashion shows.

In addition, the lighting was to reflect and integrate with the design theme: an interpretation of the Art Nouveau, Vienna secession and Glasgow style of the 1890s with its emphasis on arts and crafts.

Much of the general lighting is from theatre projectors by CCT Theatre Lighting. These tungsten halogen luminaires are suspended at high level in decorative metal-work orbs between the structural arches of the fully glazed atrium and provide lighting at ground level four storeys below. Gobos are used in some of these luminaires.

Similar projectors are used at the west end of the building to illuminate a Palladian facade.

A number of small tungsten halogen floodlights by Thorn Lighting are used to emphasise the arched steel, cathedral-like structure of the building.

To give an inviting, warm atmosphere, much use has been made of GLS lighting, its inefficiency being partly offset by the use of a central dimming system.

Two styles of spherical luminaires and one quarter sphere were specially designed for the project by the lighting consultants and produced by Designed Architectural Lighting and Shepley Dawson.

Using 40W to 100W pearl and amber lamps, these luminaires provide decorative, ambient lighting in the atrium space, which includes two scenic lifts.

Circulation lighting in the retail balconies is by recessed low voltage downlights by Erco Lighting.

To give maximum flexibility there is a programmable control system by Electrosonic using dimmers, photo-cells and a time clock. This allows fully automated,



Night-time view of the Surrey Quays shopping centre.

seven-day control for normal use and pre-set facilities for special functions.

Architects for the project were Hugh Martin and Partners; the lighting scheme was by Lighting Design Partnership.

London dockland

Surrey Quays is a £35 million shopping development at Rotherhithe in London's Docklands. It

consists of 36 retail outlets and a food court.

Derek Phillips Associates were called in to design the lighting for the public areas, which have a nautical theme. Working to a brief from architects The Fitzroy Robinson Partnership, they designed an energy saving scheme which enhances the architecture and creates an exciting environment for shoppers and tourists.



A shopping mall with a nautical air at the Surrey Quays centre in London.



General view of the atrium, Princes Square centre, Glasgow.

THE GREAT POWER SHOW



HILDMANN, SIMON, PETER & SCHMITZ/SMS

3.16 GB

The choice of a nautical theme is reflected in the specification of Wotan's NDL metal halide lamps which, compared with the WDL version, cast a cool light in the double height mall areas and central atrium. The total effect is warmed by the mainly tungsten lighting of individual shopfronts.

The metal halide lamps are in luminaires by Franz Sill, supplied through LDMS. To make them as unobtrusive as possible they are concealed in cowl below the air conditioning ducts.

Specially made porthole style luminaires are mounted on the balcony edges. These use 16W 2D compact fluorescent lamps and were made by Exterior Lite Services.

In the malls, the artificial lighting is intended to balance the high level of natural light and provide an interesting environment at night with a fairly even illuminance (150 to 250 lux). This is enlivened by the addition of more of the porthole luminaires mounted in a false balcony which gives the impression of a ship's deck.

In the 4m high, single storey areas, sparkle is added to the ceilings by low voltage tungsten halogen downlights. These recessed fittings are by Baulmann, Germany, again supplied through LDMS.

To enhance the nautical flavour in the malls, lighthouse style fittings were specially designed and made by Exterior Lite Services. They use 50W high pressure sodium lamps and although they add little to the lighting level, the 4.75m high fittings with their top lanterns create an outdoor atmosphere.

In the atrium at night, 70W high pressure sodium floodlights by Harvey Hubbell uplight the glazed roof to prevent a black hole effect. This warm coloured light was chosen to contrast with the cool downlighting below.

Murals commissioned from local artists are painted on the gable-end walls at the two main entrances. These are lit from below with 70W and 150W metal halide lamps in surface mounted Tangent spotlights by Concord Lighting, making an eye-catching scenario at night when they are visible through the glass walls.

Southampton

Another centre with a nautical theme is Canute's Pavilion at Southampton's dockland. Here, a main mall connects two shopping



Above: windows lit by Lita's high pressure sodium luminaires at Marks & Spencer, Gateshead. Above right: a small, exclusive window at Jean Patou, Paris, lit by Erco's Oseris low voltage spotlights.

areas, each with an atrium.

The second atrium is part of a new phase of development. Lighting Design Ltd was responsible for the lighting scheme for phase two and is now going on to plan lighting for the refurbishment of phase one.

To create a sense of movement in the second phase atrium, theatrical projectors on a gantry above the mezzanine floor are switched on as darkness falls and cross fade with a series of patterns projected onto the mezzanine floor.

These luminaires by Strand Lighting use 500W tungsten halogen M40 lamps with a long life. Controls for the projectors, and other lighting throughout the scheme, are by Electrosonic.

The edge of the mezzanine floor is defined by lines of blue neon lighting by Neolec.

Under the mezzanine floor, recessed in a Formwood suspended ceiling, there are miniature tungsten halogen, low voltage 20W Starpoint fittings by Electrolite.

Narrow beam 100W 12V spotlights by Erco Lighting are mounted at the base of the sup-

porting columns to uplight the roof structure. Colour filters can be added to give a change of atmosphere to suit varying occasions.

Similar narrow beam spotlights are used in the food court over the tables. They are mounted on Hitrac lighting track which also carries tungsten halogen uplights to light the ceiling.

Shop facias on the first floor are lit by low voltage spotlights from Light Projects, mounted on long arms.

In the ground floor malls, low voltage, adjustable downlights by Guzzini light the shop facias. Columns dividing the shopfronts are lit by low voltage downlights by Reggiani.

To guide people through the mall which links the two atria, downlights by Designed Architectural Lighting are used. These each contain a 150W metal halide lamp by Wotan and have an etched, sand blasted glass plate suspended below the fitting. An alternative version without the decorative plate and using a 70W lamp provides infill lighting in the mall.

Architects for this project are Covell Matthews Histon.



Windows with pulling power

Shop window lighting has to work hard for its living. A shop window display should be an irresistible invitation to go into the shop to have a closer look at the merchandise, and eventually to buy it of course. In about 95% of cases, lighting is an indispensable ingredient in a successful window.

Most stores and shops now realise that it takes more than just a lot of light to catch the attention of passersby. Designing shop window lighting is an artistic, creative process with a wider choice of lamps and luminaires available than ever before to bring out the individual characteristics and desirable features of the goods on display.

The image the shop wishes to project also plays a part in the choice of lighting equipment. Does it, for instance, wish to appear exclusive and expensive, or inexpensive and friendly?

Low voltage, miniature spot-

lights continue to dominate the field, sometimes with multiple lamps on one long stem that reaches right down into the display area. They are produced for track, mono point, individual ceiling plate mounting and sometimes for suspending on bare wires or rods that carry the current. Most ranges offer a choice of accessories to manipulate the beam.

With their small size, minimum heat output and ability to add sparkle they are eminently suitable for a wide range of goods from watches, jewellery and silverware to confectionery and fish.

They are also useful, of course, for very small display windows which would be dwarfed by conventional mains voltage spotlights.

The sparkle and convenient size of low voltage tungsten halogen lighting should not blind window designers to the properties of other light sources however. There is a

place, for example, for the powerful blue-white light of metal halide and some shoe shops use this to great effect.

Philips' White SON lamp is the most recent light source to be introduced for shop windows and there are now completed installations using this high pressure sodium lamp.

Marks and Spencer's store in the Metro shopping centre in Gateshead uses White SON lighting for its window display. These lamps succeed where PAR38 lamps with low voltage halogen spotlights could not provide the right solution.

The high level of illumination visible in the store interior through the open-backed windows made it difficult for the PAR lamps, mounted high above the display, to attract the attention of people in the street to the results of the window dresser's efforts. Additional halogen spotlights mounted at floor level still left the displays vainly longing for attention. Even worse, they created unattractive shadows.

The 50W White SON lamps have greatly increased the lighting level while maintenance has been reduced because of the long life of the lamps. The pleasant warm light (colour temperature 2500K) creates a welcoming atmosphere in the displays and the good colour rendering ensures that nobody will be mistaken about the fashion colours of the season.

Both the 8° and 12° spotlight versions of Lita's projectors are used with the lamps.

A selection of other successful shop windows is shown on this page, each with different goods to promote and therefore different lighting problems to solve.



China displayed on glass shelving in a prime shopping site: Waterford/Wedgwood window at Oxford Circus, London, lit by Concord's low voltage Tiller spotlights on track and using 28° and 13° lamps.

POWER STAR HQI-TS FROM WOTAN.

Produced by a lamp only 114 mm long and 20 mm wide, yet with a light output and colour brilliance that puts many larger lamps in the shade.

Its warm white or intermediate colour appearance provides extraordinary flexibility of application.

Whether for surface or area lighting, for use in offices, conference halls, museums or production areas;

or in parks, pedestrian precincts and for floodlighting façades.

Plus eye-catching displays in showrooms, shop windows and exhibitions.

And, for sheer economy it steals the show from other lamp types. One single HQI-TS 150 watt can replace eight 120 watt tungsten PAR lamps. It uses 80% less energy and lasts three times as long.

WOTAN

Type	Lamp wattage	Length mm	Diameter mm
HQI-TS 70	75	114,2	20
HQI-TS 150	150	132	23
HQI-TS 250	250	163	25



Vertical and horizontal lighting track is used to light a window by Esprit, London. It carries Eclipse low voltage spotlights by Erco.

Leading the way into an open Europe

With only three years to go before the single European market is a reality, Reggiani has become the first Italian lighting company to open a British factory. *LEN* discussed with Ralph Altmann, managing director of Reggiani UK, the directions in which he sees the company developing and the advantages of a UK manufacturing base.

know because I was Prima's managing director at the time. The fact that Reggiani asked me to cross over to head Reggiani UK probably says it all about the relationship between the two companies."

Could he see any other immediate advantages besides improving the supply of luminaires? Altmann nodded enthusiastically, and went on to indicate that he particularly welcomed the closer contact with architects and designers that this move would inevitably bring about. Reggiani, he continued, had always aimed to build strong links with UK specifiers but those links would be 'immeasurably strengthened' by the establishment of Reggiani UK. "It is reassuring to specifiers to know that a company actually manufactures over here; that they can make direct contact, influence design, discuss projects not just around a drawing board but against the scene in which the fittings will be created."

Wooing the specifier

A vital part of the Reggiani UK strategy was to woo interior designers and general lighting specifiers. Stressed Altmann, "We'll go to almost any length to give them what they want. Our research has shown up big gaps in the choice of fittings available to them. I'm not going to spell out what those gaps are but they'll become clear when our '89/'90 designs come on the market."

For UK specifiers to have their say, to have a real influence on what we produce, we need UK designers who can adapt Italian flair to our needs

Turning to design, he said that no-one could deny that the Italians had a flair; it was evident in most spheres of product, including lighting. "But for UK specifiers to have their say, to have a real influence on what we produce, we need UK designers who can adapt Italian flair to our needs, and they are precisely what we are seeking at the moment."

But were such designers hard to come by? He paused briefly to consider the question. "Let's put it this way. Last year, Reggiani UK produced 350 000 fittings. This



year, our target is 450 000 and I expect us to pass it. In four years' time, you can look to 800 000. Now this is high volume, but at the same time we are committed to high design. That calls for people not only with proven skills in original design but with a sound grasp of modern production techniques. Brilliant design is nothing unless it can be interpreted in terms of volume. However, I'm confident we shall find the right people and ultimately we shall set up our own design unit."

He discusses the ramifications of volume production, taking up a fitting to make his point. "Now this is only a simple downlighter but it has nine different parts", identifying each with a tap of the finger, "and each of those items requires a tool costing anything up to £20,000."

Now, Ralph Altmann has very decided views about the role of the lighting scheme designers, the consultants, against the UK's fast-developing lighting scene. "They

whole industry benefits because every successful lighting scheme is a splendid advertisement for us all."

A question of confidence

So what does the future hold for Reggiani UK? "Now there's a question. It almost forces a managing director into making optimistic noises so I shall go the other way."

We are investing a further £250 000 into the factory this year to make it one of the most advanced luminaire manufacturing plants in the country

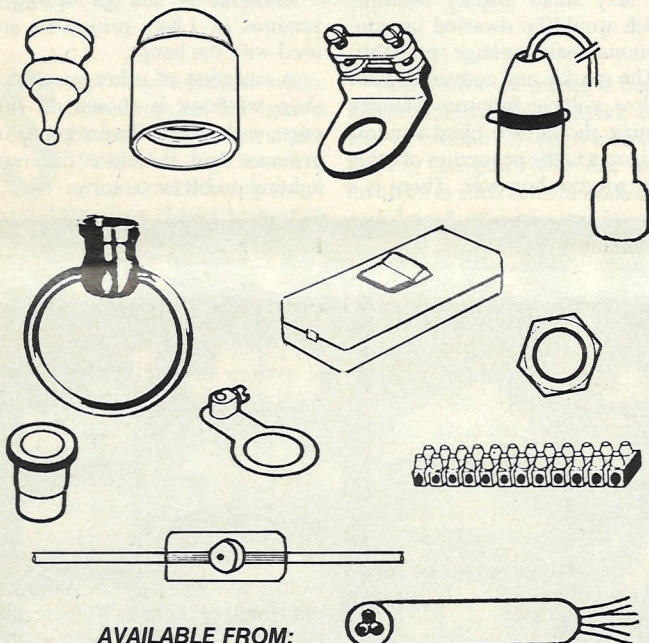
I'll give you that facts and let other people be the jurors. Obviously we have all the excitement of setting up a new company with a young and strongly-motivated team. That's point one, and straightforward. Point two is that we have a rare advantage: our name is already famous, plus we have an established market already over here, and that market has a fast developing potential.

"I'll add two further facts to show our confidence not only in the future of Reggiani UK but in British commercial lighting in general. We are investing a further £250 000 into the factory this year to make it one of the most advanced luminaire-manufacturing plants in the country. And in a few months, we'll be taking the wraps off a lighting display-and-demonstration area that will make ordinary lighting showrooms a thing of the past."

"I think an open Europe will make a far bigger difference to the UK lighting industry than most people believe. I know that Reggiani UK, by being the first Italian company to open its factory doors here, will be well placed to benefit from the change in '92."

Overseas lighting companies are likely to show increased interest in launching production units in the UK as the time gets nearer for a truly European market. Where Italy is concerned, Reggiani UK has a head start. It will be interesting to see what they make of it.

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Ralph Altmann, managing director of Reggiani UK which came on stream a year ago, is typical of the new breed of European businessman. Altmann — slim, bespectacled, multi-lingual, and with a degree in law — effectively commutes between the UK and Italy.

What had prompted Reggiani to open a UK factory, the only one of the major Italian lighting companies so far to do so? "Frankly, Reggiani of Italy were a bit short on options," he conceded. "The UK specifying market for lighting has been growing at such a rate that it actually accounted for about half of Reggiani then found itself faced with an upsurge of sales in France and Germany. Something had to be done, and that 'something' was the setting up of a spacious purpose-equipped factory over here with its own fully computerised offices."

For six years before the opening of Reggiani UK in Borehamwood, the products had been successfully marketed in the UK by Prima Lighting. How did Prima feel about being so summarily jettisoned? "It wasn't like that," he smiled. "In fact, Prima completely agreed with the decision. I should

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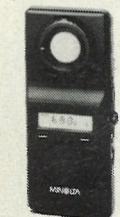
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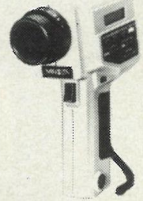
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Tridonic

• From Concept • TO COMPLETION •

Tridonic

The name of Tridonic, well known throughout the UK lighting industry, is set to become equally well known around the world. In a major new move, Austrian parent company Zumtobel AG has renamed its electrical components division Tridonic, and the Tridonic brand will be used worldwide.

The division's products include control gear for fluorescent and HID lamps, wound and electronic transformers and electronic ballasts for fluorescent lamps.

Manufacturing started 35 years ago in Austria and now takes place around the world, forming the world's largest producer of control gear. The production techniques used were undreamt of in the early 1950s — techniques which are vital for keeping costs low and quality high. Automated production lines are designed and manufactured in-house and CAD/CAM systems are used to ensure the company reacts quickly to market needs.

Product development continues at a fast pace, fuelled from two sources — lamp manufacturers and Tridonic customers.

Over the years there has been a constant stream of new products from lamp manufacturers. Liaison takes place at the highest technical level to ensure that control gear is not only technically correct but is available in time for the introduc-

tion of a new lamp.

This liaison continues throughout the product's lifetime. An example of this is metal halide 70W and 150W control gear, developed to meet lamp manufacturers' requirements for 230V, 240V and 250V tappings and, more recently, thermal cut-outs.

Likewise there is liaison with Tridonic customers. It would be impossible for an electrical engineer to design a choke or ignitor in isolation. He needs to know such requirements as size, mounting methods and thermal characteristics. There might be a need for built-in fuses, tappings or lower Δt . In this way the product evolves as, for example, the slimline chokes for HQI lamps.

Cooperation

This cooperation with both lamp and luminaire manufacturer takes place on an international scale and ensures that the products are precisely what the market place requires.

While a strong market for traditional wound products will still remain for many years the main current areas of research and development are in electronics. It is here where huge investments have been made in production and testing equipment.

And it is in the area of electronic ballasts for fluorescent and HID

lamps, and electronic transformers where the great changes will be seen in the next few years.

Tridonic UK naturally benefits from the world wide activities of its parent company. The scale of operations offers tremendous economies in production and raw material costs and generates a vast pool of knowledge.

Close liaison

In the UK, Tridonic liaises closely with lamp manufacturers and luminaire designers to ensure products are correct for the home market.

The UK company, based at Basingstoke, Hampshire, is essentially a sales and stocking operation. Tridonic's secret of success is based on a simple principle — minimum overheads and maximum service.

An essential tool to provide the

level of service required is a computer system using software written specifically for Tridonic's requirements — vital with a product range covering thousands of components. The company's stocking policy has contributed significantly to the sustained high growth achieved over recent years. It is accepted as a matter of principle that customers should be supplied from stock rather than wait for their requirements to be produced to order. Unless the item is extremely special or very rarely required it will be held in stock.

Delivery is normally by Tridonic's own transport, thereby extending the element of control.

Customer contact is maintained through expanding external and internal sales teams.

Technical back-up is of paramount importance and a vast array of literature is available including

the comprehensive Design Manual. Experienced personnel are also on hand to answer queries, to assist and advise.

Although Tridonic is associated primarily with control gear and transformers, there is the belief that luminaire manufacturers like to buy a package of products.

Distribution

Therefore the range has been expanded, under careful control, by making agreements for distribution with other major names in the European lighting industry.

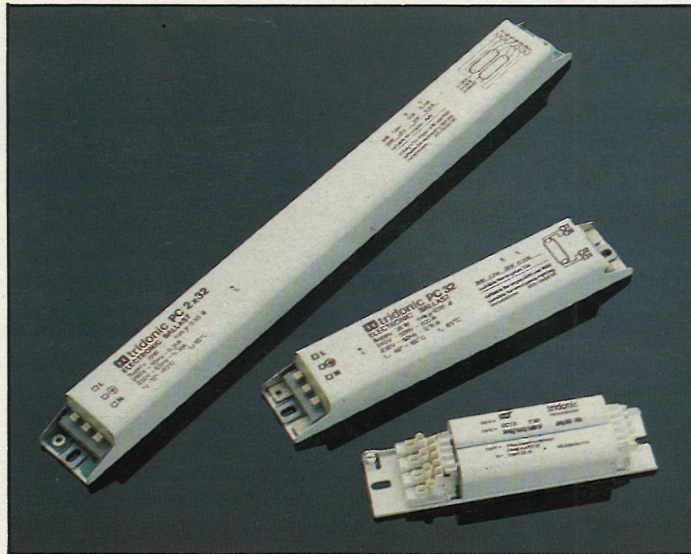
Examples include:

- full range of capacitors in plastic and metal cans approved by all the major test houses including BSI;
- connector system from Wieland Bamberg in Germany;

Delivery is normally by Tridonic's own transport.

- range of standard reflectors and a design service for reflectors and louvres;
 - terminal blocks manufactured by a sister company in the group;
 - complete range of lamp-holders;
 - selection of accessories;
 - components for weather-proof fittings which can be supplied in kit form.
- During 1989 there will be further developments.

Tridonic has clearly defined requirements not only for its products, but for the types of company with which it wishes to be associated. For instance, companies should be approved to BS5750: Part 2 wherever possible. Tridonic, itself, has been assessed in accordance with the BSI Registered Stockists Scheme.



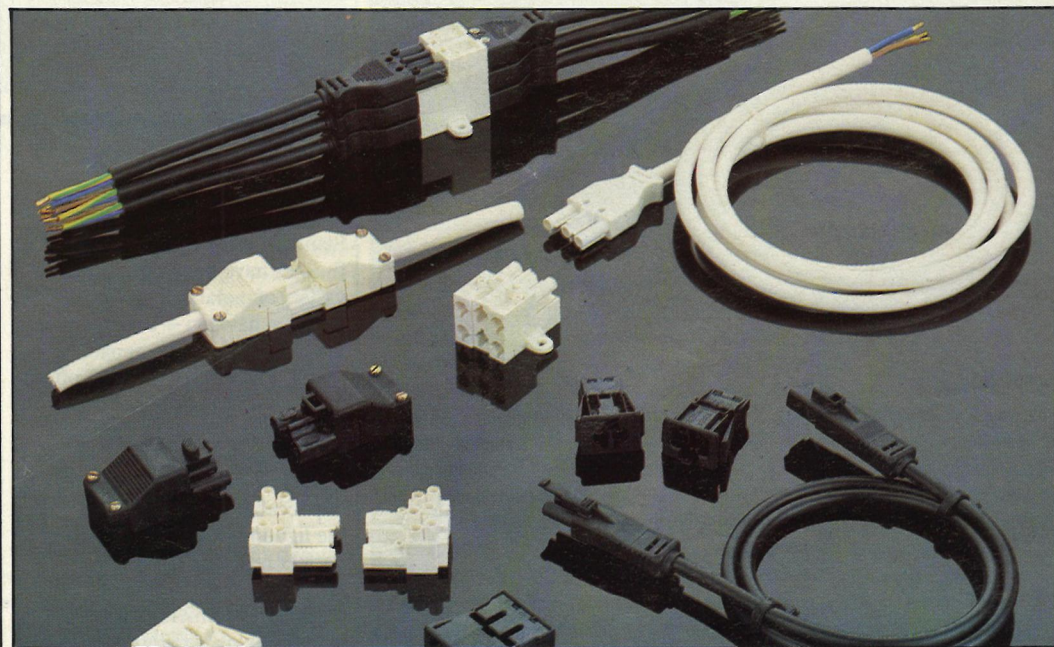
PC Electronic ballasts

Few people need convincing about the advantages of electronic ballasts: energy saving, longer lamp life, flicker free instant start, no cathode flicker, no stroboscopic effect and so on. However, the PC has additional features. It is, for instance, totally compatible with both argon and krypton filled lamps.

With twin lamp units, a defective lamp is shut down automatically while the other continues to operate. Standard, single lamp units can be dimmed down to 30% using standard fluorescent dimming equipment.

By using a simple tapped transformer, PCs are suitable for stepped dimming, typically 50%, 75% or 100%, although this can be varied to customer requirements. This is particularly useful in shops where it can be used either alone or with other light sources such as low voltage tungsten

halogen.



Connector system

The system is manufactured by Wieland Bamberg in Germany and distributed to the UK lighting industry by Tridonic under an exclusive agreement.

Developed for both mains and low voltages, the ST17 and ST18 systems can cater for the requirements of luminaire manufacturer, installer and end user.

For the luminaire manufacturer the benefits are simple assembly and wiring.

The installer will find the correct size and length of leads will connect simply and securely.

The end user can be confident he has secure, tidy and safe wiring which will allow him the flexibility to change or relocate luminaires quickly and simply.

ST18 3 pole connectors

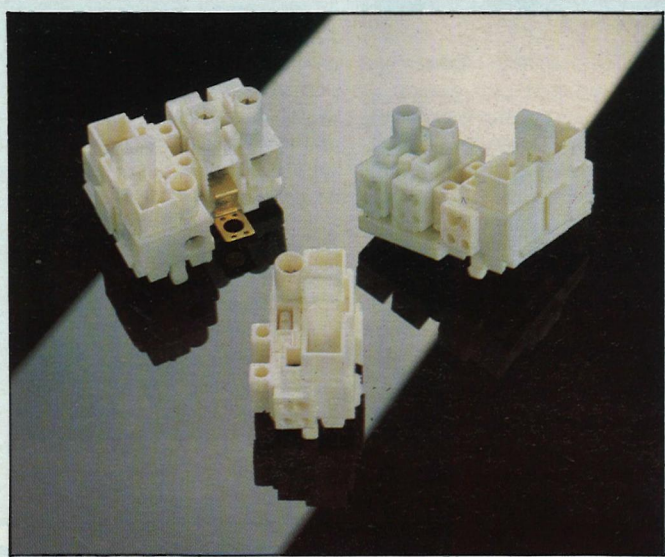
Connectors can either be moulded onto leads of the specified size and length or, alternatively, can be assembled from three simple snap-together components and wired by the luminaire manufacturers or installer.

A range of snap-in recessed connectors is also available.

ST18 components are available in 3-pole format as standard, but are available up to 7-pole format.

ST17 2 pole connectors

Connectors are moulded to the specified size and length of lead. Snap-in recessed connectors are also available.



Fused terminal block

A new family of fused terminal blocks and in-line fuse holders has been introduced. All designers' requirements vary and a number of new features have been built in to ensure those needs are met.

Snap-in feet ensure speed and ease of assembly. There are two versions of the fused terminal block, one includes an earth tag which is screwed down from above.

There are four push wire terminals for 0.5-1.00mm² cable on each pole on the luminaire side and screw terminals for up to 3 x 2.5mm² cable on the input side.

The fuse holder takes standard 25mm x 6.3mm cartridge fuses from 1A to 13A, which can be inserted from above or below. A spare fuse may be mounted on top of the fuse holder.

The fused terminal blocks and in-line fuse holders are made from white nylon 6.6 with a maximum working temperature of 120°C.

Tridonic

• From Concept • TO COMPLETION •

Transformers

The range of transformers comprises four elements:

- wound transformers as components 25-500VA;
- transformers in sheet metal enclosures with optional secondary fusing and thermal cut-outs;
- low voltage system with a fully protected transformer module complete with a connector system;
- electronic transformers.

Transformers as components

Wound transformers for low voltage lighting need to be designed specifically for that purpose. Voltage regulation is of prime importance as the lamp life can be reduced by 50% with just 5% overvoltage. Windings should cater for fluctuations in supply

voltage.

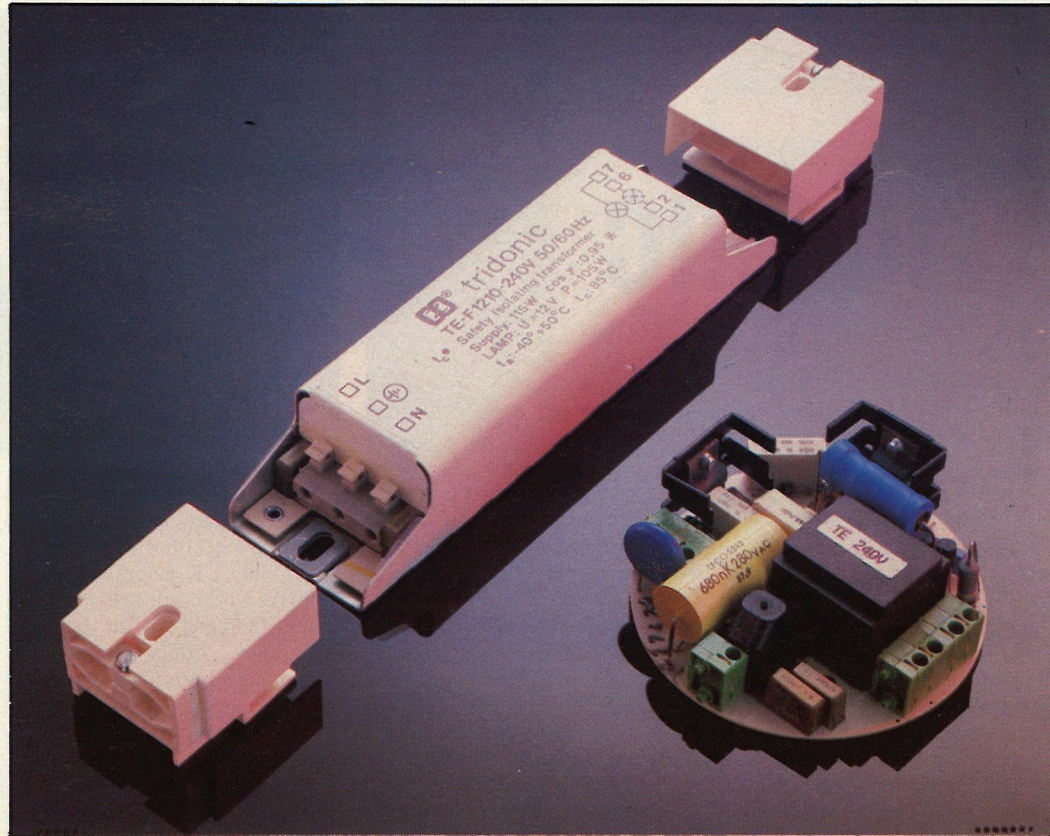
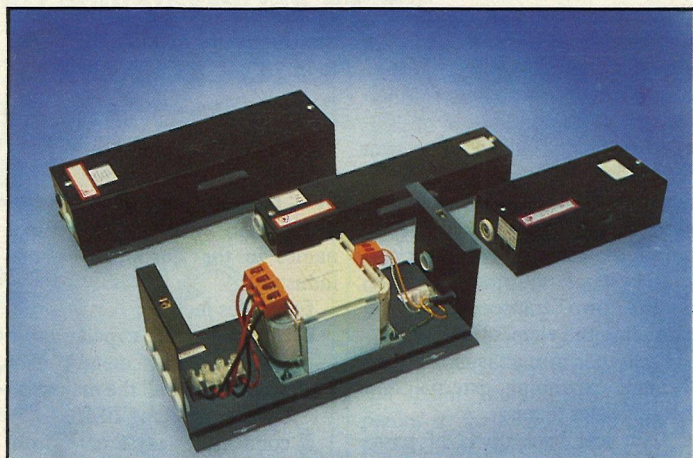
For additional safety, Tridonic transformers are insulation class H for which IEC 742 gives a maximum running temperature at 165° C. However, to maximise transformer life and to protect against possible overload an auto-reset thermal cut-out, set at 140°C, can be supplied.

Transformers as components can be supplied from 25VA to 500VA.

Boxed transformers

The same transformers are available in sheet metal enclosures which comply with 'F' mark regulations. Each unit has an anti-surge primary fuse and connection is made using large capacity terminal blocks.

Secondary fusing, either single or per lampway, and thermal cut-outs are optional.



Electronic transformers

The main disadvantage of wound transformers is that as one lamp fails voltage increases on those remaining. This is eliminated with

the Tridonic 105VA electronic transformer. It is designed to keep secondary voltage constant, regardless of load, between 10W and 105W. The unit will run 5 × 20W, 2 × 50W, 3 × 35W, 1 × 75W or 1 × 100W lamps.

In addition, it has short circuit and overload protection so no

additional fuses are required. Harmonic filters and RFI suppressors are built in.

The unit may be used with approved dimming equipment.

Two formats are available — the TE-F1210 which has a metal case for which end caps are available, and the open round TE-E1210.

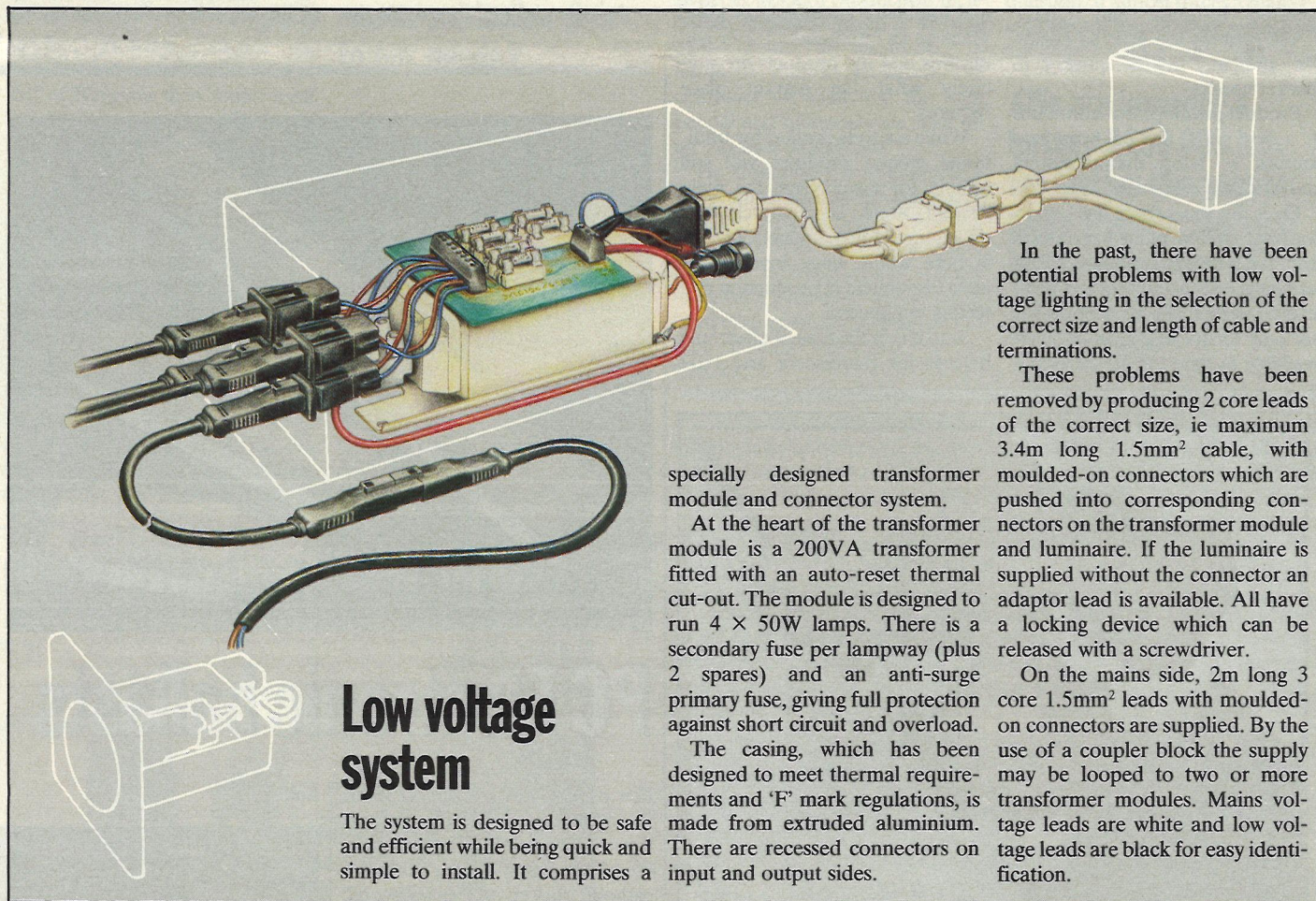
Reflectors and louvres

Louvres

Specialised louvres can also be produced to customers' individual requirements. The critical factor is flexibility of tooling which allows specially designed louvres to be produced economically in a range of high quality finishes.

Length, breadth, height, distance between cross blades, horizontal reflector lip, design of the parabolic side or axial reflectors, design of transverse reflector, fixing methods and finish can all be specified to order.

The options are detailed in the Tridonic Louvre System catalogue.



Low voltage system

The system is designed to be safe and efficient while being quick and simple to install. It comprises a

specially designed transformer module and connector system.

At the heart of the transformer module is a 200VA transformer fitted with an auto-reset thermal cut-out. The module is designed to run 4 × 50W lamps. There is a secondary fuse per lampway (plus 2 spares) and an anti-surge primary fuse, giving full protection against short circuit and overload.

The casing, which has been designed to meet thermal requirements and 'F' mark regulations, is made from extruded aluminium. There are recessed connectors on input and output sides.

In the past, there have been potential problems with low voltage lighting in the selection of the correct size and length of cable and terminations.

These problems have been removed by producing 2 core leads of the correct size, ie maximum 3.4m long 1.5mm² cable, with moulded-on connectors which are pushed into corresponding connectors on the transformer module and luminaire. If the luminaire is supplied without the connector an adaptor lead is available. All have a locking device which can be released with a screwdriver.

On the mains side, 2m long 3 core 1.5mm² leads with moulded-on connectors are supplied. By the use of a coupler block the supply may be looped to two or more transformer modules. Mains voltage leads are white and low voltage leads are black for easy identification.

Reflectors

Standard reflectors with a range of finishes have been developed for a variety of metal halide, white SON, tungsten halogen — both mains and low voltage — and compact lamps.

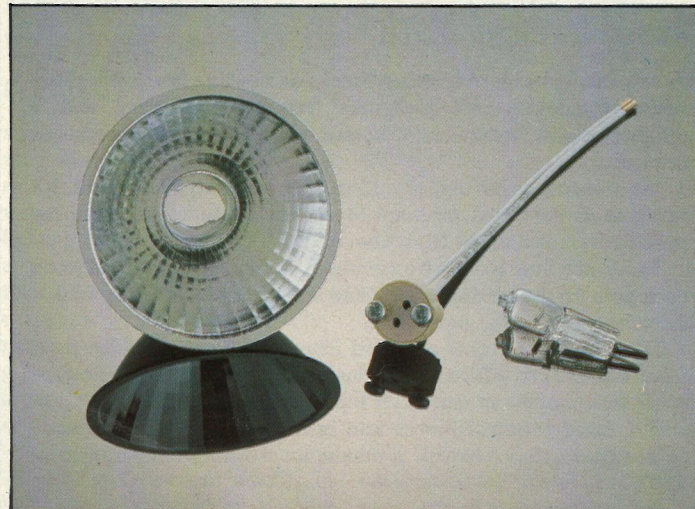
For each reflector full photometric data can be supplied for use in catalogues or data sheets.

Manufactured from highest quality materials and finished to impeccable standards, they offer the lighting designer a short-cut to perfect reflector design.

Alternatively, reflectors can be made to customers' specifications by modifying existing designs or

producing a custom product.

Introduced recently is a totally new concept in reflector design for low voltage lighting. The reflectors are meant for use in luminaires which have hitherto used dichroic lamps. There has been concern amongst end-users about the high cost of relamping. With this new system capsule lamps are used, reducing costs dramatically. By releasing two screws on the face of the specially designed lampholder the reflector can be removed by rotating it through 30°. It can then be cleaned or changed for a different type. This system is available in 50mm and 71mm diameter spot and flood.

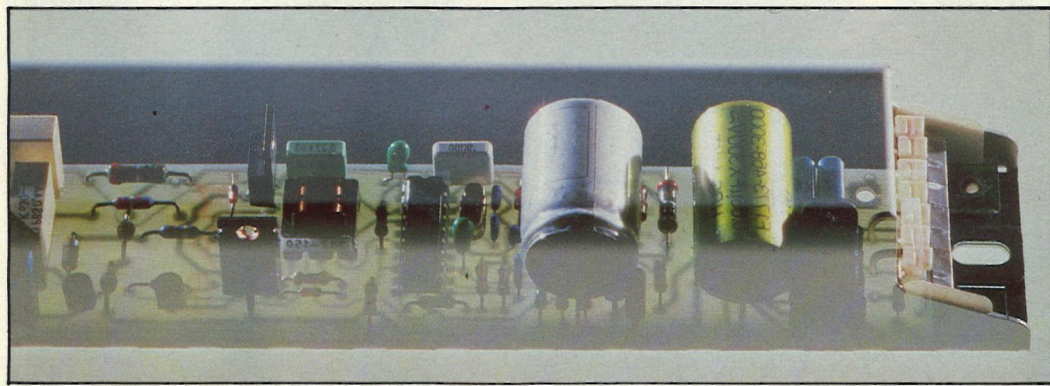


Tridonic

• From Concept • TO COMPLETION •

Hanover Fair 1989 Hall 9, Stand D17

It is not only the Tridonic name that will be new at the 1989 Hanover Fair. The stand will feature other significant developments including an extension to the already comprehensive product range.



PC-A Electronic ballasts

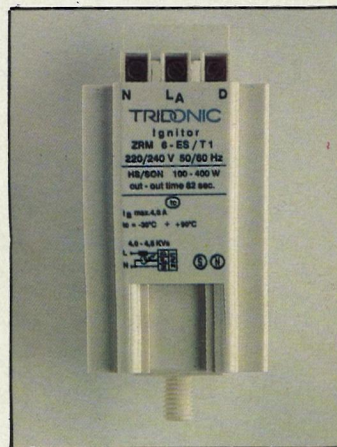
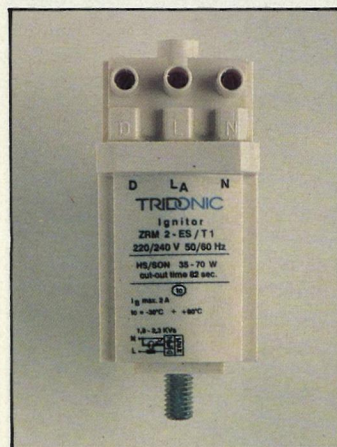
The PC-A is a second generation product which follows the successful PC electronic ballast. Tridonic engineers have developed a special electronic chip to control the main functions of the ballast. It is the first time advanced chip technology has been used in a product of this type.

Immediately after Hanover the PC50A ballast, for single 58W lamps, will go into production with other versions following during the course of the year. Two special features include its ability to function in an ambient temperature range of -25°C to 60°C and its use with a nominal supply voltage of 220V up to 240V.



Tridonic low voltage system

The system is designed to be safe and efficient while being quick and simple to install. It comprises a specially designed, fully protected transformer module and connector system for $4 \times 50\text{W}$ lamps.



Ignitors with built in timers

At the end of their life SON and metal halide lamps are likely to extinguish and re-ignite in a continuous cycle. Two ignitors have been developed to counteract this problem. Both work on the principle that once the power is turned on the ignitor will only function for a specific time and, hence, number of ignition cycles until the power is switched off. The ignitor will then reset. The ZRM 2ES/T1 and

ZRM 6ES/T1 for SON lamps function for 80 seconds and the ZRM 6ES/T1, for metal halide, operates for 11 minutes.

Not only will the maintenance engineer be able to identify defective lamps but the annoyance of cycling lamps is also removed. In addition, for metal halide lamps one possible cause of rectification is removed as the risk of electrodes being damaged is eliminated.

Electronic ballasts for TC-D lamps

PC electronic ballasts are already available for linear fluorescent and TC-L, compact lamps. The introduction of 4-pin versions of the Dulux D and PLC, for instance, means these lamps have the benefit of use with electronic control gear. The main point of interest for companies involved in public house and hotel lighting is that they can be dimmed to 30% using conventional dimming equipment.

Electronic control gear for HID lamps

The PCI 32A is a major development as it is Tridonic's first electronic ballast for HID lamps. Exact lamp current, no flickering, stable colour during service life, and long life endurance are some of the

benefits.

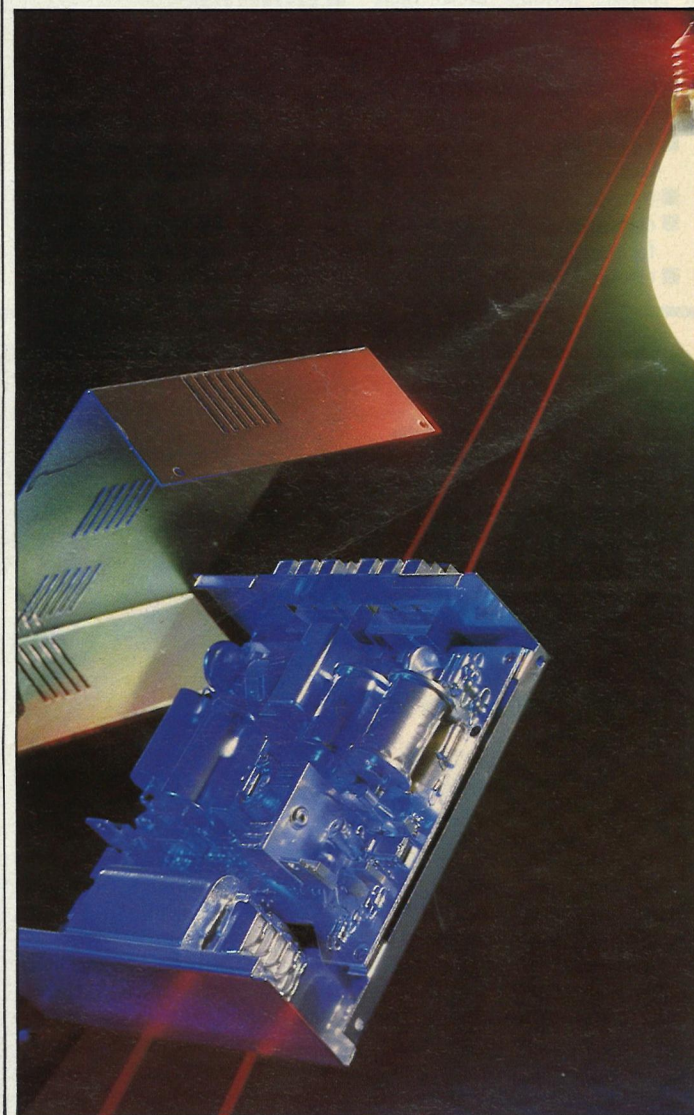
The first unit is designed to run the GE MXR 32W lamp, operating with DC. So an absolutely flicker-free light output is achieved.

Transformers with thermal protection

Three different types of thermal protection are offered on 50VA and 100VA type ECT safety isolating transformers:

- A one-time only thermal fuse on the primary side which will act if the temperature exceeds specification.
- A PTC fuse which protects the transformer in the same way as a thermal fuse but resets once the power is turned off.
- A thermal cut-out, already used extensively on HQI control gear, which resets automatically once the windings are within the correct temperature range.

All three versions are designed to protect the transformers both from abnormal thermal conditions and from overload.



Tridonic

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Tridonic Information Service

Design manuals

As part of its service to luminaire designers Tridonic has produced a comprehensive design manual containing electrical and dimensional information.

For those whose interest is only in specific product areas there is a range of short form design manuals, including:

- fluorescent chokes and capacitors;
- HID chokes, ignitors and capacitors;
- transformers;
- electronic ballasts and transformers;
- terminal connectors;

- lampholders;
- exterior and interior luminaire components;
- accessories;
- connector system.

Technical Bulletins

Technical Bulletins are mailed to all customers giving information about important changes to the product range, including the introduction of new products and other major developments. These bulletins are numbered for designers to check they have received all the facts.

Brochures

New products are publicised by a four-page leaflet which is mailed out or inserted in the technical press.

- Recent leaflets include:
- HID update 3;
 - capacitors;
 - low voltage system;
 - kite marked capacitors;
 - connector system;
 - fused terminal blocks;
 - reflectors.

Videos

Two videos are currently available on loan.

- A 20 minute programme covering compact fluorescent and electronic control gear, HQI control gear wound and electronic transformers.
- A 10 minute programme covering wound and electronic transformers.

Other programmes will become available during the next 12 months.

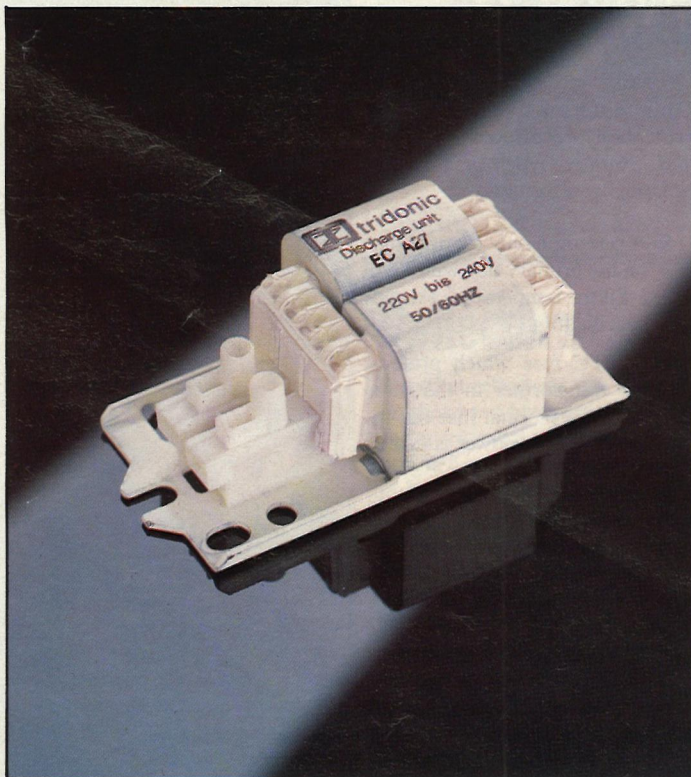
Discharge unit

It is not uncommon to find HID lamps used in fittings which are connected by means of a normal 3 pin plug.

This is perfectly acceptable provided the fitting does not include a power factor correction capacitor.

If the fitting is hard-wired, then BS4533: Section 8: 8.2.7 states that after 80 seconds the capacitor must have discharged to a level of 50V, and if a plug is used then it must have discharged to 34V after 1 second.

The greater rate of discharge is achieved by wiring the discharge unit in parallel with the power factor correction capacitor.



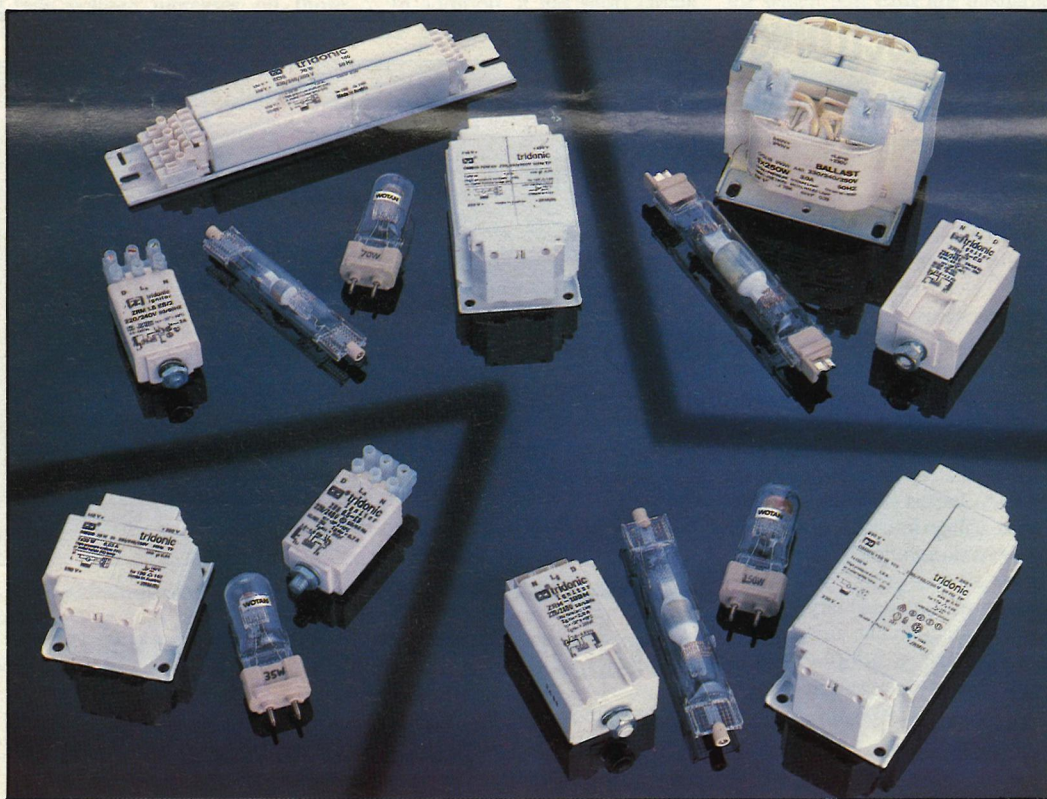
Capacitors

Tridonic are the exclusive agents for lighting capacitors produced by SEL (Standard Electric Lorenz).

Two types are offered: PMP with plastic cans, push-wire terminations and metalised polypropylene dielectric; MP with metal cans, push-wire terminations and metalised paper dielectric.

In both cases dimensions are kept to an absolute minimum, to be compatible with today's compact luminaires. PMPs have a minimum diameter of 30mm, and MPs 26mm.

Both types are approved by BSI, SEMKO, NEMKO, DEMKO and FI; MPs are also approved by VDE, OVE, CEBEC and SEV.



Metal halide control gear

The newer generation of 35W-150W lamps such as HQI-TS, HQI-T and Arcstream require a superimposed pulse ignitor and a tapped choke fitted with a thermal cut-out.

The specification has been defined from field experience and ongoing consultation with the lamp manufacturers. It has been accepted for some time that the choke should be tapped 230V/240V/250V as the lamps are extremely sensitive to overvoltage. The luminaire manufacturer should use the 250V tapping which may be changed on site as necessary.

A new development over the last 12 months has been the use of thermal cut-outs which were introduced as an added safety measure

to cover the unlikely occurrence of the lamp acting as a rectifier at the end of its life. The choke is not designed for DC operation and immediately overheats. The thermal cut-out not only protects the choke but also the luminaire itself from damage.

All Tridonic chokes for metal halide lamps up to 150W are now fitted with a thermal cut-out as standard. The device is also offered as an option on other chokes for HID and fluorescent lamps and transformers.

The market requirements for this range of products are constantly changing and becoming more sophisticated. This has resulted in chokes with a lower temperature rise (Δt) and now a

new ignitor, with a built-in timer, known as the ZRM-6ES/T11. The timer allows it to function for a total of 11 minutes unless the power is switched off, at which point it resets. With this system cycling lamps are automatically shut down.

Remote gear packages are becoming increasingly popular. Not only are they simpler, but some luminaires provide insufficient space to mount the gear. The units contain all that is required to run the lamp: choke with built in thermal cut-out (up to 150W), superimposed pulse ignitor, capacitor and fuse. The enclosure is made from black-painted sheet steel and conforms with 'F' mark regulations.

Updating lighting design techniques

Experts in different areas of lighting talked about their approach to their work at an RIBA conference held late in 1988. *LEN* reports.

Lighting for effect, safety, efficiency and conservation were among topics discussed at a conference called *Lighting design update* held in London recently. Architects, interior designers and others involved in lighting design attended this event organised by the Royal Institute of British Architects and chaired by Owen Luder, a past president of the RIBA.

Speaking on *Lighting for effect: the visual designer's needs*, Sally Storey of Lighting Design Ltd defined the basic job of a lighting designer. It was, she said, to bring out the best in a space — occasionally to hide the worst — taking into account the tasks to be carried out within that space.

In this context, spaces often had to fulfil a number of functions and therefore required the facility to provide different atmospheres at different times.

A restaurant populated by hard-headed business people at lunchtime, for instance, could also attract romantically minded couples in the evening if it had a lighting installation sufficiently flexible to allow complete changes of atmosphere.

The major techniques available were basically downlighting, uplighting, wall washing, feature lighting, and the use of colour and controls. Each of these had advantages and drawbacks.

To summarise, downlighting could be an energy-efficient way of using light, but could also be dull and unimaginative. Uplighting, on the other hand, was diffuse and could produce a feeling of spaciousness but was inherently less energy efficient. Unless it was well designed, wall washing could



Left: entrance to a building on the Guildford Business Park, Surrey, lit by 150W metal halide projectors that give a punchy light on the floor.

Right: the reception area at Hines Meadow office development, Maidenhead, has a chromium ceiling. The lighting was designed to play on the reflections from this ceiling and create a starlight effect.



make a room rather gloomy. Feature lighting could be used to emphasise what the client wanted, but at the cost of playing down the architecture.

Colour options, said Ms Storey, were wider than the use of filters or coloured lamps. More subtle effects could be achieved by mixing light sources that had different colour temperatures and by thoughtful selection of reflectors when a colour choice was provided.

Finally, lighting controls included the use of pre-set panels and other switching arrangements to create mood. An example of the effective use of this was in shopping centres where the nature of the general lighting was altered as the sun went down.

The tools available changed with technical developments, but in most cases, Ms Storey said, a combination scheme using a number of lighting techniques would be found to provide the most appropriate and most exciting solution.



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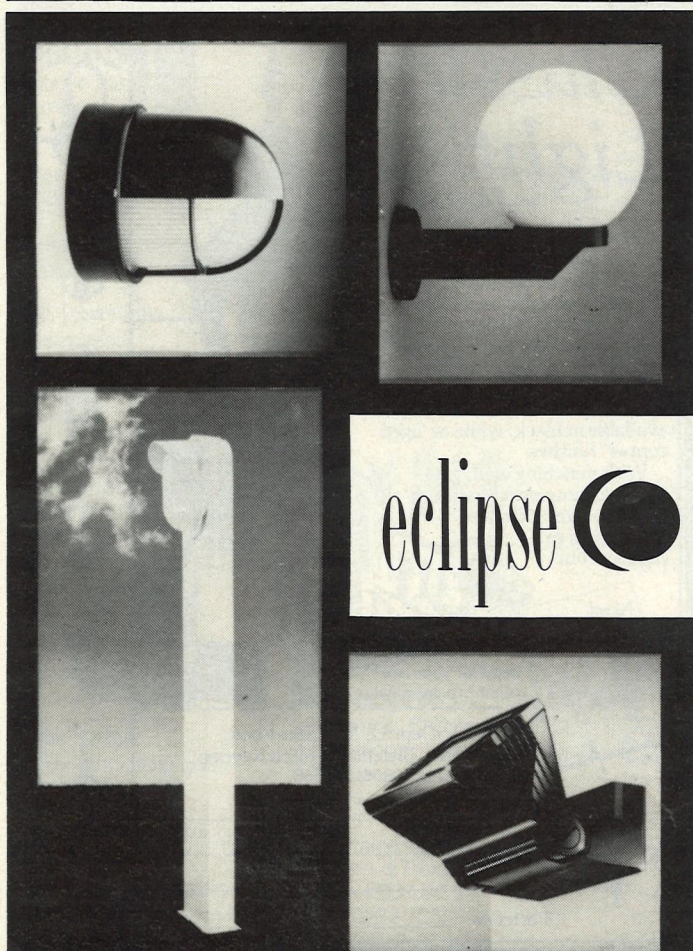
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In the following lecture, a standard procedure for designing an emergency lighting scheme was outlined by Chris Watts of Men-vier (Electronic Engineers) Ltd.

Initially it was necessary to establish the fire authority's requirements concerning the method of operation of the emergency luminaires and the lighting duration for the premises involved, he said.

Plans of the building should then be marked up to show escape routes. Where these passed through open areas, a decision had to be made whether to treat the route as a defined escape or to cover the whole area, treating it as an undefined escape route under BS5266 : 1988.

The location of luminaires was then marked on the plan, so that they would illuminate both hazards and fire safety equipment. Hazards included changes of direction or of floor level. All exit doors, including the final exit, must be lit.

Exit and safety signs required by the fire authority should also be incorporated, as should additional luminaires for spaces such as covered car parks, plant rooms and larger toilets.



Above: dramatic floodlighting highlights the facade of Longleat House.

Below: lighting techniques can be used to add interest and intrigue to a garden. Here, a row of spherical lights on columns lead visitors up a drive.

Mains lighting should then be considered, to decide whether the existing luminaires were suitable for conversion or, if not, whether separate emergency luminaires were compatible with the normal lighting.

Following this step, emergency luminaires should be selected and photometric data obtained from the manufacturer. Light output from these should be checked to ensure that it met the standard 0.2 lux on defined and 0.1 lux on undefined escape routes.

At this stage it might be found necessary to add further luminaires to obtain the required lighting levels.

Finally, after installation, appropriate test and maintenance instructions and a completion certificate (for inspection by the fire authority) had to be given to the client.

Efficiency

In the next talk the theme of lighting for efficiency was taken up by John Boud, of Kingston Polytechnic. He compared the traditional approach to illuminating engineering, which considered how much light was desirable for specific visual tasks, with the more recent attitude that there was more to lighting than illuminance.

The primary measure of the efficiency of a lamp was the number of lumens it gave per watt, but this could not be considered in isolation from other lamp characteristics such as life, cost, noise and flicker. In particular, when a lamp of better colour rendering was introduced, visual clarity could be high even though illuminance was reduced.

Future practice was likely to show greater appreciation of the effect on overall efficiency of this sort of visual quality.

The finish of room surfaces had a greater effect than was often realised. For the same average illuminance, a room with a dark surface would need twice as many installed lumens, and hence double the wattage, as one with white walls and ceiling.

Changes

Other practices too had changed, said Mr Boud. In the early days of lighting engineering a high level of uniformity was seen as desirable. However, more recently diversity of illuminance in an interior had become valued.

Flexibility, or the ability to respond to change in time, was a part of the lighting field in which the speaker believed there were

ent, there should be few lights on. When there were many people present, however, they should each be able to choose their local lighting conditions conveniently.

The views of the most important people in any organisation — all the employees — should be respected. Mr Aston said that involvement beat pure automation

hands down every time, as well as ensuring that energy conservation was practised properly.

Lighting control had become an established technique and he felt that the product range available, which included mains switching and high frequency regulation, could meet any requirements.

Outdoors

External lighting provided an amenity and improved the environment, said Janet Turner, Concord Lighting Ltd. The use of carefully thought out lighting could add spatial qualities to an outdoor scene and even "make a third rate building look like a pretty good building".

She proved her point by showing slides of a variety of outdoor scenes, ranging from a marina to a stately home.

When planning a garden lighting scheme from scratch, she said, the lighting designer should work closely with the landscape designer or gardener. There was a need to conceal the luminaires, perhaps by putting a plant in front of a floodlight, for example.

It was not advisable to aim for high illuminances, as too much light bleached out delicate detail.

Coloured light could be a magic ingredient on water, perhaps by the use of submersible luminaires. It was also very effective on snow.

Saturated colour should not be used on planting, however, as a Walt Disney effect could result. Metal halide luminaires were recommended for lighting trees.

Another way of using light in a garden was to have a row of decorative outdoor lights to lead people, up a driveway or along a path to another part of the garden for example.

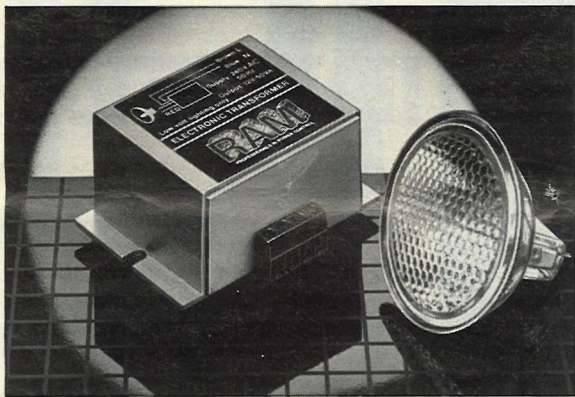
A point to watch here was that globe shaped luminaires cast light in every direction and might illuminate objects or areas the designer did not wish to light. There was a wider selection of fittings available these days, including a number of angular designs.

To achieve a successful result, Ms Turner emphasised that lighting must be planned early in the landscaping process, not overlaid afterwards. It could then add fun, excitement and stimulation.

The final lecturer of the day was David Stone, of The Lighting Practice Ltd, who reviewed some of the latest lamps and luminaires available, with the accent on high technology.

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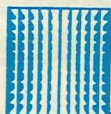
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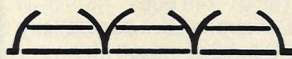
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Telex: 266086 TULITE G
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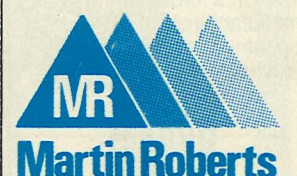
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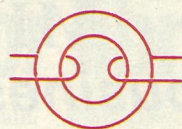


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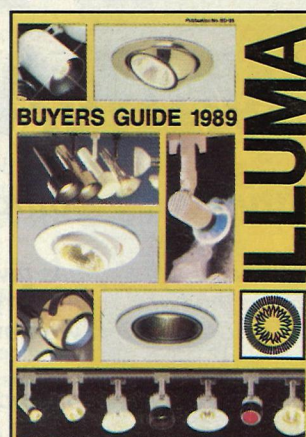
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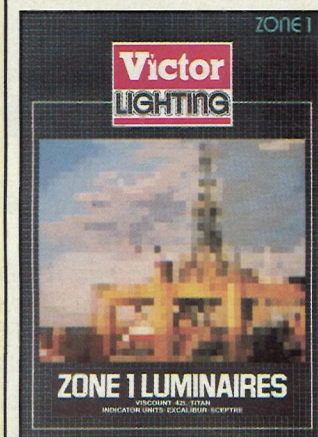
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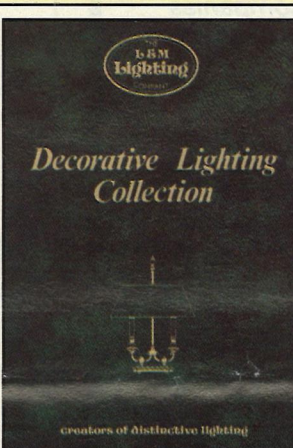
Inter-connecting insulated
poles with trigger-operated
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disruption of scaffolding/
platforms: circle 90



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all Illuma Lighting products
in numerical order. Each
product is illustrated and
described with dimensions,
lamp wattage and finish
applicable. This new Guide
includes all the latest
Marktrack additions and the
new 240v Topspot: circle 91



The NEI/Victor Zone 1
catalogue offers an extensive
range of flameproof
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NEI/Victor luminaires are
made to the same high
standard for onshore or
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92



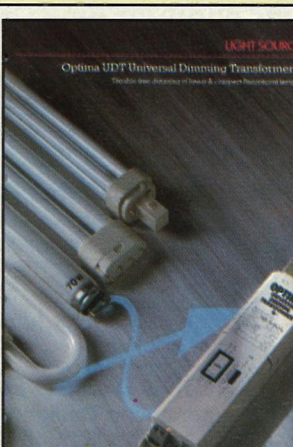
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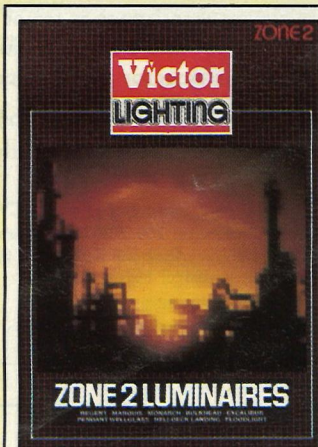
Channel Safety Systems Ltd: The LASER PACK Low Voltage Conversion Kit presents the opportunity to convert selected luminaires in a low-voltage tungsten halogen installation to emergency operation, whilst retaining their primary role as an integral part of the overall designed lighting scheme: circle 95



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to 5%, with instant restrike
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circle 96



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control and associated
accessories have registered
the trade name of
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catalogue listing their
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voltage and special controls
as well as their range of
standard controls: circle 97



NEI Victor produce a range
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featuring floodlight, pendant
bulkhead and tubular
fluorescent designs, as well
as general purpose variants
offering the same quality
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circle 98

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In the first instance, please send a full curriculum vitae, including details of your current salary, for the confidential attention of:

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SPACE CALL
JOANNE BARKER
ON
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Telex: 291439 HELVAR G**

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THAT SOLVE
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Please write with comprehensive details of qualifications and experience to Mrs P A Hayden, Personnel Manager, Philips Lighting, City House, 420-430 London Road, Croydon CR9 3QR, or telephone 01-689 2166 ext 2606 for an application form.



Lighting

PHILIPS

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The successful candidates will be required to negotiate at the highest levels, with company directors, consultants, architects, local authorities and electrical wholesale companies, have a positive attitude, be well organised with the ability to oversee contracts and schemes from creating interest in our products through various design stages, up to the final installation.

Chief Lighting Engineer/Designer

The successful candidate will be responsible for major lighting schemes, computer design, fittings, design and sourcing the latest lamp technology.

Experience of lighting is essential although full training will be provided. You will have the ability to absorb technical information and demonstrate the need and ability to succeed.

The company recognises the importance of the above appointments by offering an excellent salary package with bonus scheme and company car.

To apply

Send your written details to:

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Plus selection of high quality lamp holders etc.

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QUALCAST BATHROOMS LTD. (GARDEX)
TEL: 061 430 5269 FAX: 061 406 6241**

Bare wire system for library

The British Library's first venture into retailing, its new bookshop within the Grenville Library, was designed by Insight Design Services.

Access still had to be available to the double height perimeter

bookshelves and John Smith, leader of the project team, conceived the idea of a free standing, compact unit occupying 50m² and operated from a single service counter.

The bookshop has over 100m of

shelf space, eight racking panels for cards and other gifts and eight triangular showcases for the promotion of exhibition "tie-ins" and other key products.

To create interest, the showcases are set out in a saw-tooth profile, the triangles between them being filled with low level, glass topped display cases.

The showcases are simple boxes with cream melamine interiors, into which a variety of adaptable shelves and racks can be fitted to hold books, maps and other displays. As the boxes are modular, the equipment is easily

interchanged, as are the lift-off header panels.

It was decided to build into the top of each showcase two of Concord Lighting's downlights that use PL compact fluorescent lamps. The two level infill display cases each contain two of Concord's Tiller low voltage spotlights with ultra-violet filters. These are controlled by a Lutron dimmer.

General lighting for the bookshop is by Reggiani's Trolli system, which consists of two parallel bare wires with miniature tungsten halogen spotlights resting on them.

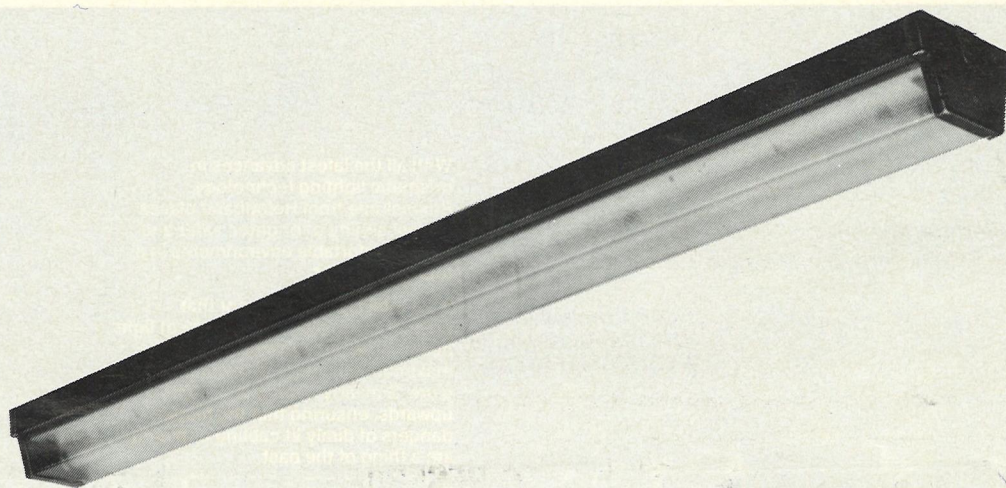
Right: showcase lighting in the British Library bookshop.



Appearances can be deceptive; this building is not a mosque but a railway station. The main station at Kuala Lumpur, Malaysia was built in the Islamic style at the turn of the century and has been renovated and extended over the past year.

Malaysia's railway authorities chose Siemens bell-shaped luminaires for the lighting scheme to blend with the station architecture. The reflector used in conjunction with sodium lamps, provides efficient lighting; while the cast aluminium housing is highly resistant to the Malaysian climate where humidity can reach 100%.

Monitor



Vandal resistant

Range: Twin + single 8w, 18w, 36w, 58w, 70w + 36w PL
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designplan LIGHTING

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CLASSIFIED ADVERTISEMENTS

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ANOCOIL LIMITED



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Ano-Coil Limited, now part of the world's largest aluminium coil anodising group require a nationwide Lighting Executive. The successful candidate will be responsible for the sale of preanodised aluminium to lighting manufacturers. They will also need to work closely with lighting consultants in an effort to gain approval for Ano-Coil Products.

Candidates should be aged 25-40, have experience in selling, be self-motivated and well organised. Experience of the lighting industry is not essential.

Remuneration includes an attractive salary and bonus scheme, company car, private health scheme and contributory pension plan.

Please send full details of career to date to: **Mr Paul A Rowe,**
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Applied Security Design, a leading European manufacturer of amenity and security luminaires seek to appoint two self motivated sales representatives.

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SALES

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Eterna Lighting is a long established major lighting manufacturer and distributor based in North London. A Sales Representative is required to cover the London area.

Candidate must be well connected with electrical wholesalers and distributors and lighting experience would be an advantage.

Excellent salary and car together with all the usual benefits of a large company are offered to the right person.

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Young designer keen to progress as an independent lighting consultant required for international lighting design practice. *Contact:*

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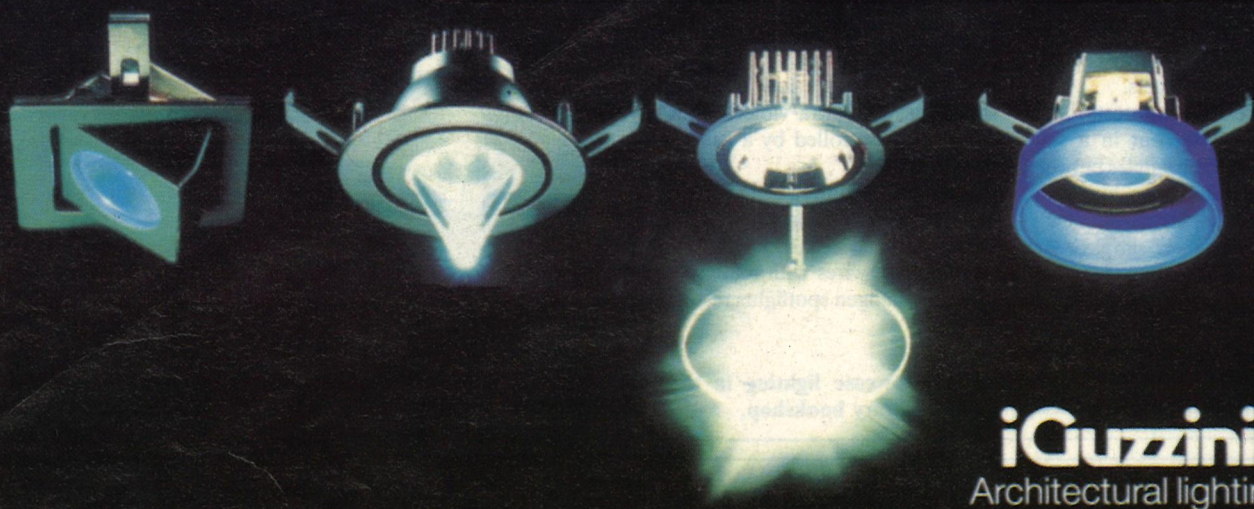
LASER LIGHT SCENE

A new A4-8 page brochure from Forma Lighting features the range of iGuzzini Laser low-voltage miniature downlights. Laser luminaires are made of diecast aluminium and have heat reducing fins to increase the surface area and dissipate heat away from the fitting and into the ceiling void. A practical feature is the ability to access and remove

fittings, the central circular or square support frame can be entirely removed. These features allow lamps to be changed or safety glasses and accessories to be added at a later date. Laser luminaires come in square or round versions in white, black or brass finishes offering some 30 variations. Fittings use dichroic or the two pin halogen lamps

requiring reflectors—giving a choice of narrow or broad beams of high intensity from 12 volt 20 to 50 watt lamps with appropriate transformers.

FORMA LIGHTING Ltd - SHOWROOM
Units 310-311 Business Design Centre
52 Upper Street,
London N1 0QH
Telephone: 01-288 6025



Reader Service No. 15

NEWS



Turkish delights

The splendour of the Ottoman court was sumptuously displayed at a recent exhibition in the British Museum.

An opulent display of jewel encrusted helmets, swords, daggers and scabbards, intricately carved ivory, jewelled cups, jade

tankards, tiles, tableware, caftans and many other objects d'art was lit by low voltage fittings supplied by Light Projects, who also provided technical advice.

Lighting levels had to be kept low to safeguard the exhibits, many of which are ultra sensitive to light. Luminaires included key-hole downlighters with glare reducing grilles and Par 36 integral fittings. Exhibits were further protected by the use of filters to cut down ultra-violet radiation.

Crompton goes Dutch

Crompton has been appointed UK agent for Raak Licht BV, the Dutch lighting equipment manufacturer. The product range, which covers a variety of interior and exterior lighting fittings with a dis-

tinctly modern feel, will be marketed in the UK under the name Crompton Raak. Lighting Design Service has been appointed UK distributor for the range of luminaires.

Trade literature in brief

● **Lee Colortran International** has issued four brochures covering its stage lighting. One deals with daylight luminaires, another with

tungsten luminaires; flexikits portable lighting is the subject of a leaflet, and the fourth is about accessories such as stands, suspension equipment and filters.

2D warning

A quantity of 16W 2 pin 2D compact fluorescent lamps, assembled in China from components supplied by Thorn Lighting some years ago, is being offered for sale in the UK. The lamps can be identified by a unique A1 date code stamped into the top of the cap and by their distinctive packaging. Thorn Lighting has not supervised the assembly or testing of these lamps and offers no guarantee as to their performance and safety.

● **Lab-Craft Ltd** has published its latest trade catalogue and price list on emergency lighting. It includes information about colour choices for luminaire housings.

● **F. Knobel Elektroapparatebau AG**, Switzerland, has leaflets on its low voltage transformers and electronic ballasts.

● **Building Research Establishment's** annual report for 1987-88 is now available.

● **The Electrical Wholesalers Federation** has launched its 11th edition of the *Installation materials standard wholesale catalogue*.

● **ERA Technology** has produced *Building energy management systems — a users' guide*, to help those faced with selecting from a variety of systems available from over 50 suppliers.

● **Midland Machinery Services** has a 58-page catalogue illustrating commercial and industrial luminaires made by Waldmann Lichttechnik, West Germany.

● **British Standards Institution** has published parts 1, 4, 5 and 6 of *BS3224 Lighting fittings for civil land aerodromes*.

● **Philips Lighting** has published two specifier guides to the most effective use of security lighting.

Apology

On page 20 of our January issue the two boxed photographs were inadvertently transposed. The lower picture was, of course, of the Richmond Riverside development, the upper one of the Caversham Hotel.

Our apologies for any embarrassment caused to the owners of the Caversham Hotel, their exterior lighting suppliers, Marlin, and to RADA Lighting, who provided the low brightness office lighting for the Richmond scheme.

IN YOUR NEXT ISSUE

Variety is the keynote of the April issue of *Lighting Equipment News*. First, the journal will look at the ways in which lighting can be used to enhance historic buildings and will review some recent projects in this field. Emergency lighting and signage, for instance, can prove a

major problem in rehabilitating a building of architectural merit — they are designed to be intrusive.

Then, by way of a complete contrast, we go on to look at that proto-typical twentieth century tool — the computer — and its role in lighting design.

PRISMALUME BRIGHTEN UP YOUR ENVIRONMENT

With all the latest advances in prismatic lighting technology, Prismalume from Holophane places the possibility of brighter, safer and more comfortable environments in a totally new light.

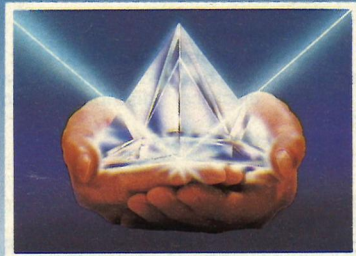
It's a total lighting concept that prismatically re-directs 60-70% of light downwards, thereby combining maximum efficiency with minimal glare. Similarly it refracts 25-30% upwards, ensuring that the hidden dangers of dimly lit cabling or piping are a thing of the past.

The result is uniformly more appealing lighting, offering a positive psychological effect on morale, leading to higher productivity and reduced rejection rates.

Maintenance is equally efficient, as the electrically inert Endural Borosilicate glass employed is effective in repelling dirt, whilst each luminaire is entirely self cleaning.

With the recent addition of a Prismapackette low wattage version of the Prismalume concept, the entire range is now versatile enough to suit almost any situation; from the smallest workshop to the largest commercial applications, such as public facilities and retail premises.

So why stay in the dark, contact us today for all the details about the Prismalume range and start looking on the bright side.



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