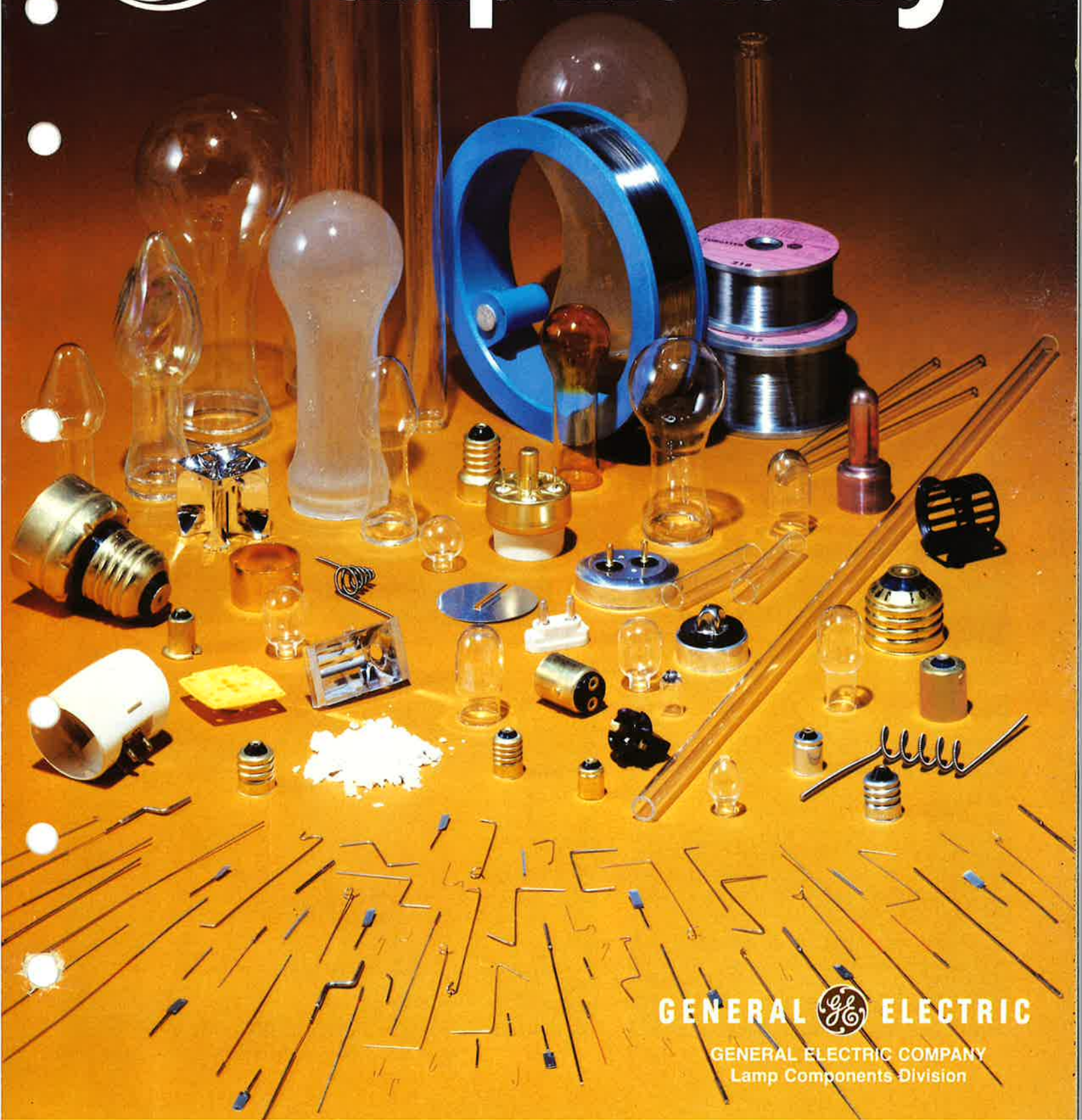




# Products for the Lamp Industry



GENERAL  ELECTRIC

GENERAL ELECTRIC COMPANY  
Lamp Components Division



# Presenting...

## General Electric's Vast Storehouse Of Lampmaking Materials & Components

One of the world's leading lampmakers is also a major source of high quality components, materials and specialty products required to manufacture all types of lighting.

This publication lists lampmaking products available from General Electric's Lamp Components Division.

Lampmaking is a highly specialized business, requiring materials and production know-how not readily available outside the industry. General Electric offers its many years of experience in manufacturing high quality materials and components designed to meet these requirements. A wide selection of "standard" products is available, but products can be "tailor-made" for specific applications.

Highly qualified engineering personnel are available to provide technical assistance on any of these products.

In the pages that follow, GE products designed for lampmaking are organized according to major lamp types. The listing in each category is a guide on product availability from GE. This list does not attempt to cover everything, so if you have special requirements that are not included, give us a call. We will probably be able to meet your requirements.

For more information on any of these products, contact your regional sales representative or our headquarters in Cleveland (see page 8). Literature is available on most of the products described in this publication.



Part of the wide variety of ribbon bulb blanks available from GE.



Tungsten filament wire (to right in photo) is supplied in almost any combination of type, diameter, finish and tolerance, to meet individual lampmaking requirements. Molybdenum support wire (to left in photo) is available in either standard shapes or formed to customer specifications.

# Incandescent Lamps

The incandescent lamp represents General Electric's best known and largest-volume lamp product line. GE incandescent lamp parts and materials are highly regarded by lamp manufacturers throughout the world.

Incandescent lamps included in this category are between  $\frac{3}{4}$  to  $6\frac{1}{4}$  inches in diameter. (Products for incandescent lamps under  $\frac{3}{4}$ " diameter are listed under the category, "Miniature & Subminiature.") The following parts and materials are available:

- Arbors
- Base Etching Fluids
- Brazing Powders
- Dumet Wire
- Exhaust Tubing
- Flare Tubing
- Formed Metal Parts
- Glass Molded Flares
- Glass Rod
- Hard Glass Bases
- Leads—Two, Three & Four-Part
- Molybdenum Wire & Wire Parts
- Molybdenum Mandrels
- Medium Screw Bases
- Mogul Screw Bases
- Monogram Inks
- Plastic Parts & Assemblies, Tailored To Your Application
- Ribbon Bulbs
- Soldering Fluxes
- Sphere Paints
- Tungsten Filaments
- Tungsten Wire & Wire Parts
- Vacuum Metallizing Wire
- Vacuum Metallizing Coils



Dumet wire for glass sealing is supplied with a bare, borated or nickel-plated surface, in diameters of 8 mils and up.



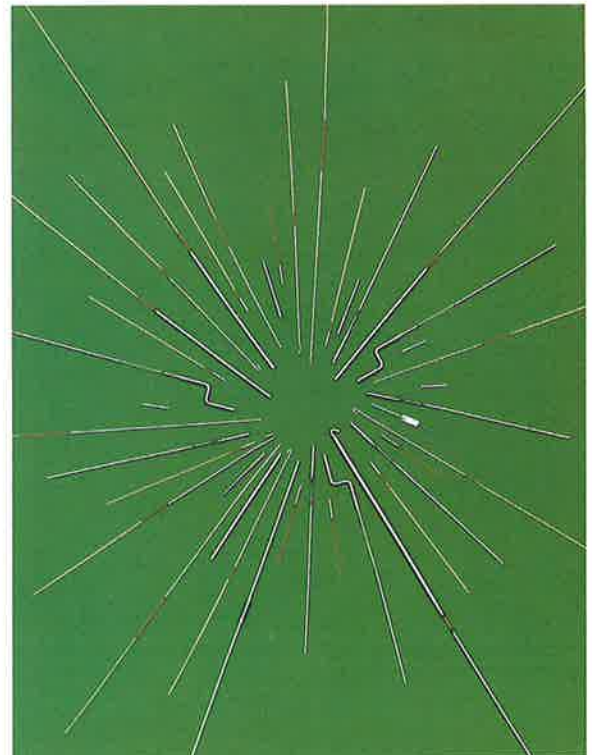
Tungsten wire used for making lamp filaments.



Standard medium screw and mogul screw lamp bases, both regular and skirted.



Glass exhaust tubing, available in diameters from .085" to .360".



Welded two, three and four-part lead wires.

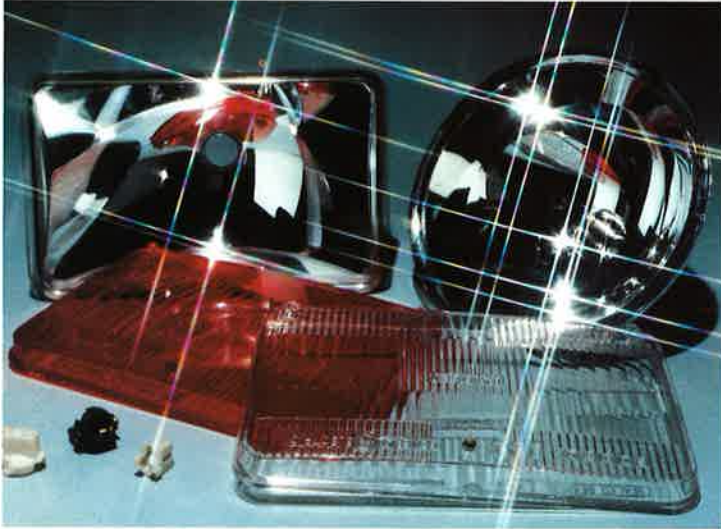


# Reflector & Sealed Beam

Both pressed glass and plastic are now used for sealed beam and other parabolic aluminized reflector lamps. GE produces a large number of reflector and lens configurations in a size range of 3½ to 8 inches in diameter to custom design.

Skirted medium screw bases with a choice of domestic or international threads are available for PAR lamps. Other parts available for these lamps include:

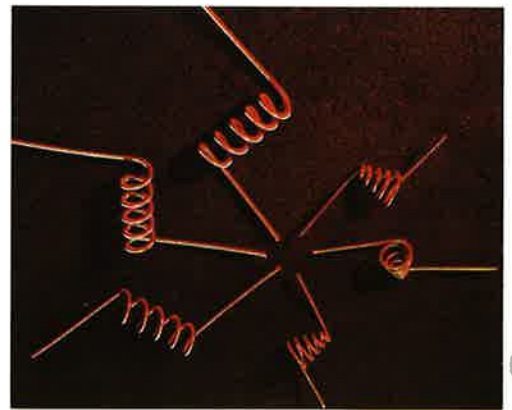
- Blown Glass Reflectors
- Brazing Pellets
- Butt Welds
- Eyelets
- Exhaust Tubing
- Ferrules
- Glass for Bridges
- Lead Wires
- Lugs
- Molybdenum Mandrels
- Molybdenum Wire & Wire Parts
- Monogram Inks
- Plastic Headlamp Lenses
- Plastic Headlamp Reflectors
- Plastic Lamp Mount Assemblies
- Pressed Glass Lenses
- Pressed Glass Reflectors
- Shields
- Skirted & Unskirted Lamp Bases
- Soldering Fluxes
- Sphere Paints
- Tungsten Filaments
- Tungsten & Molybdenum Straights
- Tungsten Wire & Wire Parts
- Vacuum Metallizing Coils
- Vacuum Metallizing Wire



Plastic headlamp lenses, reflectors and mount assemblies.



Pressed glass lenses and formed metal parts, used in sealed beam and other parabolic aluminized reflector lamps.



Vacuum metallizing coils made from overwrap strand, which was designed especially for lamp metallizing, are available in standard shapes or formed to customer specifications.

# High Intensity Discharge

General Electric makes a variety of parts and materials for high performance mercury lamps, metal halide lamps and high pressure sodium lamps.

- Butt Welds
- Dumet Wire & Wire Parts
- Flare & Exhaust Tubing
- Formed Metal Parts
- Fused Quartz Arc Tubing
- Fused Quartz Lamp Envelopes
- Halide Gas Fill Mixes
- Hard Glass Blown Bulbs
- High-Temperature Bases
- Lucalox® Ceramic Tubing
- Mogul Bases
- Molybdenum Wire & Wire Parts
- Monogram Inks
- Phosphors
- Plastic High-Temperature Insulator Parts
- Platinum-Clad Molybdenum Wire & Ribbon
- Thoriated Tungsten Shanks
- Tungsten Electrodes
- Tungsten Shanks
- Tungsten Wire & Wire Parts
- Soldering Fluxes



Some of the more common parts supplied by the Lamp Components Division for high intensity discharge lighting products.

# Projection & Photoflash



Components used in projection lamps.



Some of the plastic components supplied by the Lamp Components Division for photoflash systems.

Projection lamps which are used in very precise applications (slide, movie and overhead projectors) depend on high quality components to perform adequately in these systems. The Lamp Components Division is a major supplier to this market.

The chemical and electronic flash systems used in pocket cameras also require high reliability components. General Electric Company is a major source of plastic parts, glass parts, lead wires and wire parts to this market.

- Base Cements
- Brazing Pellets
- Butt Welds
- Exhaust Tubing
- FlashBar Reflectors & Parts
- Flashcube Parts
- FlipFlash Reflector & Parts
- Fused Quartz Rod
- Fused Quartz Tubing
- Glass for Bridges
- Glass for Stems
- Halogen Lamp Filament Wire
- Hard Glass Blown Bulbs
- High-Temperature Lamp Bases
- Ink Thinners
- Lacquers
- Lamp Bases
- Magicube Reflector & Parts
- Molybdenum Foil Leads
- Molybdenum Mandrel Ribbon
- Molybdenum Reflectors
- Molybdenum Space Leads
- Molybdenum Mandrels
- Molybdenum Wire & Wire Parts
- Monogram Inks
- Nickel-Plated Dumet
- Plastic Projector Lamp Reflectors
- Plastic Emergency Lighting Reflectors
- Plastic Video Projector Reflectors
- Pressed Glass Reflectors
- Platinum-Clad Molybdenum Wire & Ribbon
- Ribbon Bulbs
- Shellac Sprays
- Silicon Suspension Sprays
- Soldering Fluxes
- Tubing Blown Bulbs
- Tungsten Wire & Wire Parts
- Tungsten Filaments
- Tungsten Reflectors
- Vacuum Metallizing Coils



# Fluorescent

General Electric Company supplies formed end tubing up to eight feet in length, as well as popular sizes of germicidal and blacklight tubing, to producers of fluorescent lamps.

A full line of phosphors is available to enable manufacturers to produce lamps with very precise lighting

- Anode Wire
- Circline Discs
- Collars
- Exhaust Tubing

characteristics. Functional and attractive pinless, single-pin, bi-pin, recessed double-contact, and Circline fluorescent bases are provided in a variety of sizes.

A listing of available fluorescent lamp components and materials includes:

- Flare Tubing
- Formed End Tubing
- Germicidal & Blacklight Tubing
- Heat Reflectors
- High-Purity Chemicals

- Lamp Bases
- Lead Wires
- Molybdenum Mandrels
- Molybdenum Wire & Wire Parts
- Monogram Inks
- Phosphors
- Plastic Circline Lamp Parts
- Plastic Extruded Channel & End Caps
- Plastic Lamp Bases
- Tungsten Cathodes
- Tungsten Wire & Wire Parts
- Shields
- Soldering Fluxes
- Sphere Paints



Formed metal and plastic parts, glass tubing and phosphors for fluorescent lighting.



Plastic parts are available, fabricated to your lighting needs.



Fluorescent Cathodes

# Miniature & Subminiature



A sampling of available components for miniature and subminiature lamp applications.

- Base Etching Fluids
- Bulb Blowing Tubing
- Candelabra, Bayonet, Single & Double-Contact Bases
- Candelabra Screw Bases
- Dumet Wire
- Exhaust Tubing
- Filament Wire
- Fused Quartz Tubing
- Lacquers
- Lead Wires
- Metal & Plastic Bi-Pin Bases
- Miniature Bayonet Bases
- Miniature Flanged Bases
- Miniature Screw Bases
- Molybdenum Mandrels
- Molybdenum Wire & Wire Parts
- Monogram Inks
- Nickel-Plated Dumet
- Plastic Wedge Base Sockets
- Ribbon Blown Bulbs
- Shellac Sprays
- Soldering Fluxes
- Telephone & Slide Bases
- Tubing Blown Bulbs
- Tungsten Filaments
- Tungsten Wire & Wire Parts
- Wedge Base Sockets

Lighting the way for dials, indicators, and signals are an endless variety of miniature and subminiature lamps.

Subminiature lamps are usually classed as those between 1½ and 21 volts, in bulb diameters less than  $\frac{3}{16}$  of an inch.

Miniature lamps are in the same voltage class, but up to  $\frac{3}{4}$  of an inch diameter. GE also supplies parts for gas-filled miniature glow lamps.

Among the parts and materials which GE supplies to this market are:

## Special Applications

Many of the parts and materials featured in this publication are also used in applications other than those shown. These include infrared heating, stage and studio illumination, tungsten halogen lamps, backlights and floodlights for signs, and decorative lighting of many types. General Electric is the source for many of the components used in these applications, including the following:

- Blown Glass Outer Jackets
- Candelabra Screw Bases
- Coded Bulb Blanks
- Dumet Wire
- Exhaust Tubing
- Ferrules
- Formed Metal Parts
- Fused Quartz Lamp Envelopes
- Fused Quartz Tubing
- Halide Gas Fill Mixes
- High-Temperature Bases
- Lead Wires
- Lugs
- Lumiline Lamp Tubing
- Lumiline Terminals
- Medium Screw Bases
- Miniature Screw Bases
- Mogul Screw Bases
- Molybdenum Foil Leads
- Molybdenum Formed Parts
- Molybdenum Ribbon
- Molybdenum Mandrels
- Molybdenum Wire & Wire Parts
- Monogram Inks
- Plastic Fluorescent Lamp Hoods, Brackets, Fixture Parts
- Pressed Glass Lenses
- Pressed Glass Reflectors
- Ribbon Blown Bulbs
- Soldering Fluxes
- Tubing Blown Bulbs
- Tungsten Filaments
- Tungsten Formed Parts
- Tungsten Ribbon
- Tungsten Straight Cut Pieces
- Tungsten Wire



# Lamp Components Division

The Lamp Components Division of General Electric Company is a major source of specialized products for the lighting, electronics, cemented tungsten carbide and other industries. Our product capability includes tungsten products (wire, powders, metallizing coils, filaments and fabricated parts); molybdenum products (wire, powders and fabricated parts); tungsten carbide powders; glass products (tubing, cane, bulb blanks, formed tubes and pressed shapes); fused quartz products (tubing, rod, crucibles and fabrications); Lucalox<sup>®</sup> ceramic; phosphors and chemicals; lead wires; bases; Dumet and Cumet wire; formed parts (metal and plastic); and other specialty components and materials.

Because of the critical nature of these products in most applications, production is closely controlled to assure the highest quality and optimum performance. Products are available from inventory, or can be custom designed to meet your requirements. In fact, General Electric would like to accommodate your requirements for product development and application engineering in any of our product areas.

For more information, contact your local sales representative or the nearest Lamp Components Sales Operation office shown below.

## Sales Offices Lamp Components Sales Operation

### Domestic

#### CLEVELAND (Headquarters)

21800 Tungsten Road  
Cleveland, OH 44117  
(216) 266-2451

#### BOSTON

50 Industrial Place  
Newton Upper Falls, MA 02164  
(617) 332-6200

#### CHICAGO

4333 Trans World Road  
Schiller Park, IL 60176  
(312) 671-6390

#### DALLAS

14673 Midway Road-Suite 117  
Dallas, TX 75234  
(214) 661-2793

#### PITTSBURGH

205 Valley Park Drive  
Pittsburgh, PA 15216  
(412) 531-5700

#### SAN JOSE

1727 North First Street  
San Jose, CA 95112  
(408) 298-4126

#### WEST ORANGE

10 Rooney Circle  
West Orange, NJ 07052  
(201) 736-5305

### International

#### HEADQUARTERS

International Sales  
21800 Tungsten Road  
Cleveland, OH 44117  
(216) 266-3295  
Telex: 985569 (GECOLCS EUCD)

#### CANADA

Canadian General Electric Co., Ltd.  
Components Sales  
165 Dufferin Street  
Toronto M6K1Y9, Canada  
(416) 537-4481 Loc. 208

#### EUROPE

International General Electric Co.  
of New York  
Lamp Components Sales Operation  
The Old Hall, Langham, Oakham  
Leicestershire LE15 7JE, England  
0572-3960  
Telex: 34362 (GELCOS)

#### JAPAN

Soei Tsusho Company, Ltd.  
Kagoshima Bank Bldg.  
7, Azuchi-machi 3-chome, Higashi-ku  
Osaka, Japan  
(262) 3358

