

Phosphor type	U-nr	12NC: 1322...	Tc	Remark	TL	TLD	T5	CFL-I	CFL-NI	HID
					butyl or water	butyl or water	butyl	butyl	butyl	
Halo's:										
halo fine										
Warm white /29 TL fine	U1232	526 20102	2900 K		x	o	o	o	o	o
Warm white /29 TLD fine	U1230	526 19702	2900 K		o	x	o	o	o	o
White /35 fine	U1228	526 19302	3500 K		x	x	o	o	o	o
Cool white /33 fine	U1225	526 10802	4100 K		x	x	o	o	o	o
Special /75 fine	U1242	528 34102	5000 K		x	x	o	o	o	o
Daylight /54 fine (single comp.)	U1239	526 86502	6500 K		x	x	o	o	o	o
Daylight /54 fine (double comp.)	U1235	526 20702	6500 K	Blend	x	x	o	o	o	o
Blue fine	U1234	526 20502	----	for colour correction/ fancy	x	x	o	o	o	o
halo fine Easy Dispersible										
Warm white /29 TL fine ED			2900 K		x	x	o	o	o	o
Warm white /29 TLD fine ED			2900 K		x	x	o	o	o	o
White /35 fine ED	U1243	528 39702	3500 K		x	x	o	o	o	o
Cool white /33 fine ED			4100 K		x	x	o	o	o	o
Special /75 fine ED			5000 K	Blend	x	x	o	o	o	o
Daylight /54 fine (single comp.) ED			6500 K		x	x	o	o	o	o
Daylight /54 fine TLD butyl (double comp.) ED	U1251	528 39902	6500 K	Blend	o	x	o	o	o	o
Daylight /54 fine (double comp.) ED	U1252	528 40002	6500 K	Blend	x	x	o	o	o	o
Daylight /54 fine TL water (double comp.) ED	U1253	528 40102	6500 K	Blend	x	o	o	o	o	o
Blue fine ED	U1244	528 39802	----	for colour adjustment/ fancy	x	x	o	o	o	o
Triband										
RED										
YOX fine	U743	522 76802	----		o	x	o	o	o	o
YOX coarse	U719	516 73602	----	will be stopped in future	o	o	o	x	x	o
YOX coarse	U744	522 76902	----		o	o	x	x	x	o
YOX fine ED	U770	527 36202	----		o	x	o	o	o	o
GREEN										
CAT-skv	U712	515 76001	----		o	x	o	x	x	o
CAT-coarse	U721	516 80702	----		o	o	o	x	x	o
CAT-skv ED	U772	52746402	----		o	x	o	x	x	o
CBT-fine	U747	523 15802	----		o	x	o	o	o	o
CBT-fine ED	U775	528 80102	----		o	x	o	o	o	o
CBT-coarse	U752	525 65802	----		o	o	x	o	o	o
LAP:Tb	U763	526 70002	----		o	x	o	x	x	o
LAP:Tb coarse	U778	529 08602	----		o	o	x	o	o	o
BAM-green	U706	514 52302	----		o	x	o	o	o	o
BLUE										
BAM skv	U709	515 64802	----		o	x	o	x	x	o
BAM coarse	U716	516 53902	----		o	x	x	x	x	o
BAM skv ED	U771	527 45102	----		o	x	o	x	x	o
Various										
BBG ED	U773	527 97002	----	high CRI application	o	x	o	x	x	o
BBG fine	U779	529 09702	----	high CRI application	o	o	x	o	o	o
Premix 827	U780	529 51601	2700 K	Blend	o	x	o	x	x	o
Premix 840	U781	529 51701	4000 K	Blend	o	x	o	x	x	o
Premix 865	U782	529 51801	6500 K	Blend	o	x	o	x	x	o
Premix 865 HQ	U783	529 51901	6500 K	Blend high CRI application	o	x	o	x	x	o
Y-vanadate fine	U740	522 66302	----		o	o	o	o	o	x
Y-vanadate medium	U737	521 18302	----		o	o	o	o	o	x
Y-vanadate coarse	U742	522 93402	----		o	o	o	o	o	x
YAG:Ce	U728	518 81801*	----	high CRI application	o	x	o	x	x	x
CBTM	U726	517 47301*	----	high CRI application	o	x	o	o	o	o
SAE	U724	517 24302	----	high CRI application	o	x	o	o	o	o
Strontium blue ("groen") ED	U1240	527 97102	----	high CRI application	x	x	o	o	o	o
Strontium Mag ("oranje") ED	U1241	527 97202	----	high CRI application	x	x	o	o	o	o
colour /25	U2074	515 98501*	----		x	x	o	o	o	o



Let's make things better.

Fluorescent powder U716

GENERAL

Name	Barium Magnesium Aluminate:Eu
Chemical formula	BaMgAl ₁₀ O ₁₇ :Eu
Application	Blue component tri-band phosphor mix for high colour rendering fluorescent lamps (Ra > 80) and compact fluorescent lamps
Processing	Stirrer or ball mill
Suspension type	Butylacetate or water
Ordering/Packaging	1. Codenumber 1322 516 53902: 30 kg in 50 ltr steel drum

OPTICAL CHARACTERISTICS

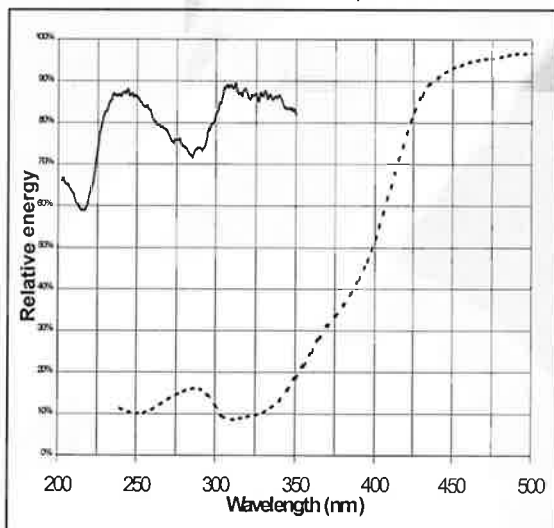
254 nm excitation		
• quantum efficiency		89 %
• UV-absorption		90 %
• wavelength at peak		451 nm
• bandwidth (50 %)		55 nm
• excitation peak		312 nm
C.I.E chromaticity coordinates		
• powder	x = 0.149	y = 0.082
• lamp TLD 36 W	x = 0.153	y = 0.082
Lumen output 100 h (TLD36W)		
• nominal		909 lm

PHYSICAL CHARACTERISTICS

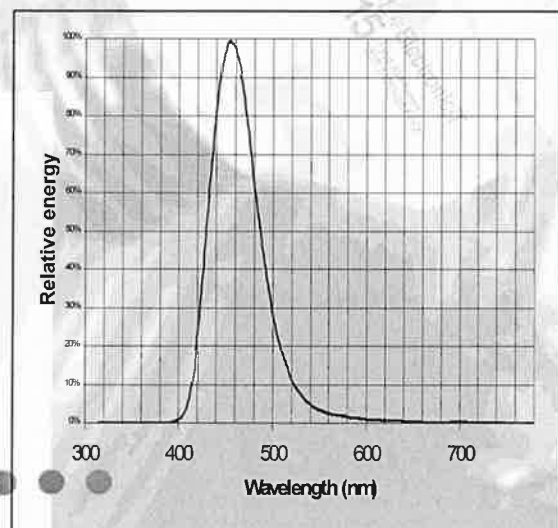
Body colour	white
Specific gravity	3.80
Particle size distribution	by laserdiffraction (Sympatec - HELOS)
• fraction ≤ 1.8 µm	≤ 14.5 %
• fraction ≤ 6.0 µm	50.0 ± 17.5 %
• fraction ≤ 12.5 µm	≥ 85.0 %
Crystal structure	β alumina

GRAPHICS

———— Excitation Spectrum
 - - - - - Reflection Spectrum



Emission Spectrum



Identification: 1322 516 53901 (CA) DATE NEW: 2001-10-24 (DATE OLD: 2000-03-15)

Let's make things better.

Philips
Lighting



PHILIPS

Fluorescent powder U743

GENERAL

Name	Yttrium Oxide:Eu
Chemical formula	Y ₂ O ₃ :Eu
Application	Red component tri-band phosphor mix high colour rendering fluorescent lamps (Ra > 80)
Processing	Stirrer or ball mill
Suspension type	Butylacetate or water
Ordering/Packaging	Codenumber 1322 522 76802: 35 kg in 50 ltr steel drum

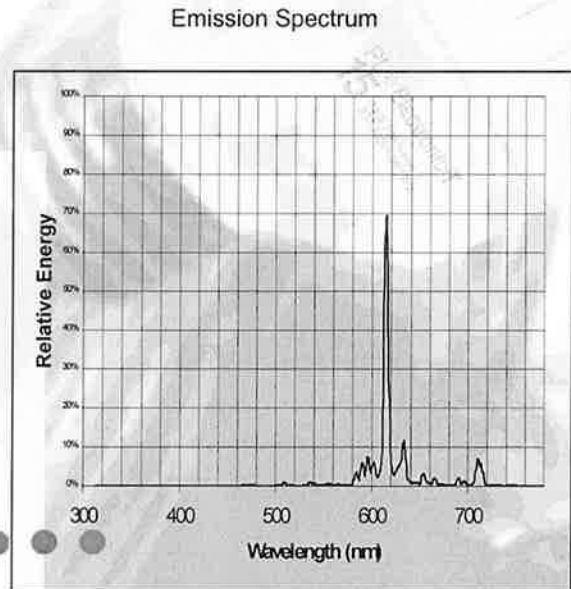
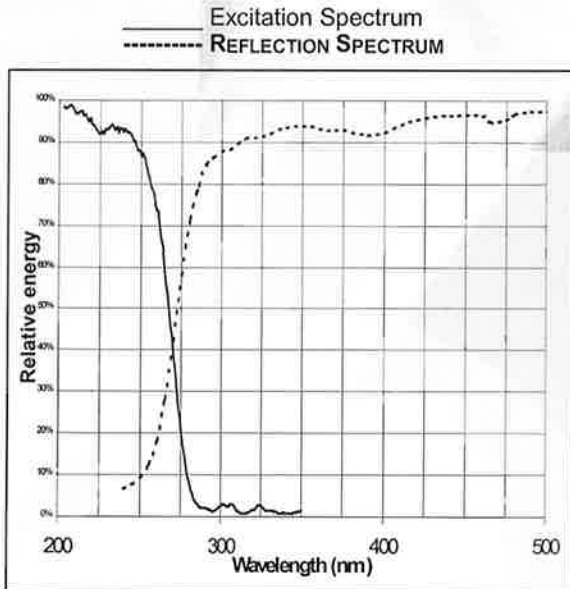
OPTICAL CHARACTERISTICS

254 nm excitation		
• quantum efficiency		84 %
• UV-absorption		78 %
• wavelength at peak		612 nm
• bandwidth (50 %)		2 nm
• excitation peak		216 nm
C.I.E chromaticity coordinates		
• powder	x = 0.640	y = 0.346
• lamp TLD 36 W	x = 0.576	y = 0.326
Lumen output 100 h (TLD36W)		
• nominal		2568 lm

PHYSICAL CHARACTERISTICS

Body colour	white
Specific gravity	5.00
Particle size distribution	by laserdiffraction (Sympatec - HELOS)
• fraction ≤ 1.8 µm	9.0 ± 3.0 %
• fraction ≤ 6.0 µm	60.0 ± 15.0 %
• fraction ≤ 12.5 µm	≥ 88.0 %
Crystal structure	Bixbyite

GRAPHICS



Identification: 1322 522 76801(CA) DATE NEW: 2001-10-24 DATE OLD: 1998-04-01)

Let's make things better.

**Philips
Lighting**



PHILIPS

Fluorescent powder U744

GENERAL

Name	Yttrium Oxide:Eu medium
Chemical formula	Y ₂ O ₃ :Eu
Application	Red component tri-band phosphor mix for high colour rendering fluorescent lamps (Ra>80)
Processing	Stirrer or ball mill
Suspension type	Butylacetate or water
Ordering/Packaging	Codenumber 1322 522 76902: 35 kg in 50 ltr steel drum

OPTICAL CHARACTERISTICS

254 nm excitation		
• quantum efficiency	84 %	
• UV-absorption	84 %	
• wavelength at peak	613 nm	
• bandwidth (50 %)	3 nm	
• excitation peak	201 nm	
C.I.E chromaticity coordinates		
• powder	x = 0.641	y = 0.347
• lamp TLD 36 W	x = 0.576	y = 0.326
Lumen output 100 h (TLD36W)		
• nominal	2568 lm	

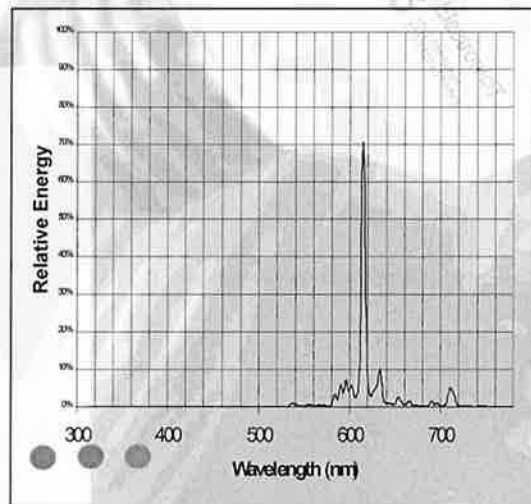
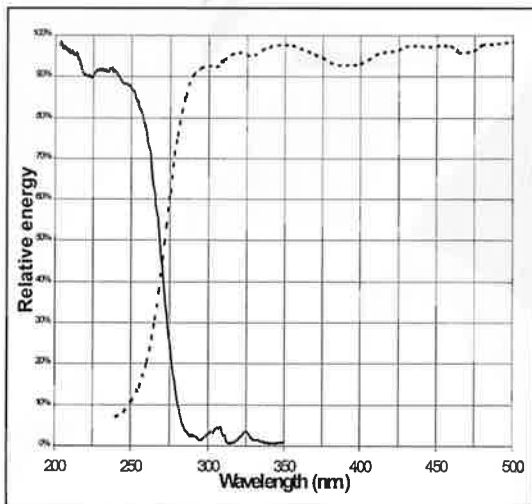
PHYSICAL CHARACTERISTICS

Body colour	white
Specific gravity	5.00
Particle size distribution	by laserdiffraction (Sympatec - HELOS)
• fraction ≤ 1.8 µm	≤ 7.0 %
• fraction ≤ 9.0 µm	55.0 ± 10.0 %
• fraction ≤ 18.0 µm	≥ 90.0 %
Cristal structure	Bixbyite

GRAPHICS

— Excitation Spectrum
 - - - Reflection Spectrum

Emission Spectrum



Identification: 1322 522 76901 (CA) DATE NEW: 2001-10-24 DATE OLD: 1996-09-26

Let's make things better.

Philips
Lighting



PHILIPS

Fluorescent powder U747

GENERAL

Name	Cerium Gadolinium Magnesium Borate:Tb fine
Chemical formula	(Ce,Gd)MgB ₅ O ₁₀ :Tb
Application	Green component tri-band phosphor mix high colour rendering fluorescent lamps (Ra > 80)
Processing	Stirrer or ball mill
Suspension type	Butylacetate or water
Ordering/Packaging	Codenummer 1322 523 15802: 50 kg in 50 ltr steel drum

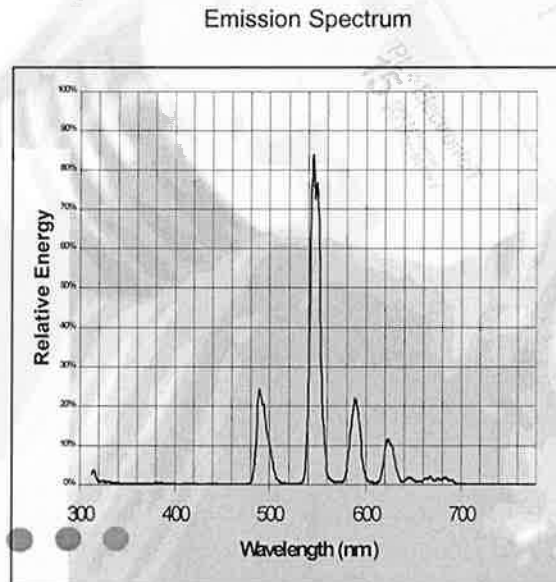
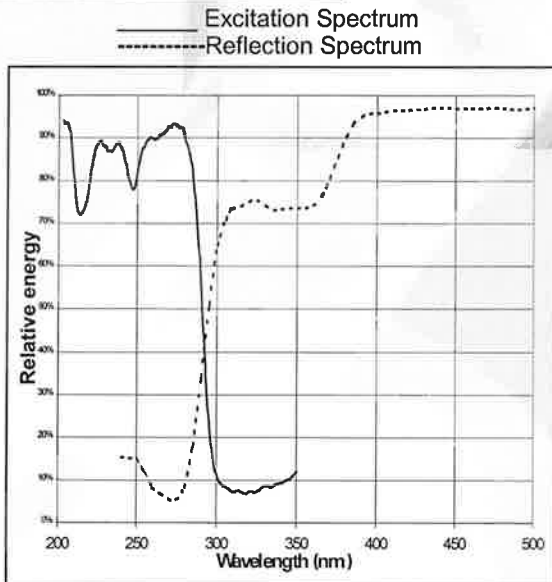
OPTICAL CHARACTERISTICS

254 nm excitation	
• quantum efficiency	90 %
• UV-absorption	93 %
• wavelength at peak	542 nm
• bandwidth (50 %)	9 nm
• excitation peak	272 nm
C.I.E chromaticity coordinates	
• powder	x = 0.346 y = 0.581
• lamp TLD 36 w	x = 0.318 y = 0.532
Lumen output 100 h (TLD36W)	
• nominal	4620 lm

PHYSICAL CHARACTERISTICS

Body colour	white
Specific gravity	4.40
Particle size distribution	by laserdiffraction (Sympatec - HELOS)
• fraction 1.8 µm	20.0 ± 6.0 %
• fraction 6.0 µm	67.0 ± 10.0 %
• fraction 12.5 µm	≥ 99.0 %
Crystal structure	monoclinic

GRAPHICS



Identification: 1322 523 15801 (CA) DATE NEW: 2001-10-24 (DATE OLD: 1998-04-01)

Let's make things better.

**Philips
Lighting**



PHILIPS

Fluorescent powder U770

GENERAL

Name	Yttrium Oxide:Eu fine ED
Chemical formula	Y ₂ O ₃ :Eu
Application	Red component tri-band phosphor mix for high colour rendering fluorescent lamps (Ra>80)
Processing	Stirrer
Suspension type	Butylacetate or water
Ordering/Packaging	Codenummer 1322 527 36202: 35 kg in 50 ltr steel drum

OPTICAL CHARACTERISTICS

254 nm excitation

- quantum efficiency 84 %
- UV-absorption 84 %
- wavelength at peak 613 nm
- bandwidth (50 %) 3 nm
- excitation peak 203 nm

C.I.E chromaticity coordinates

- powder x = 0.643 y = 0.344
- lamp TLD 36 W x = 0.576 y = 0.326

Lumen output 100 h (TLD36W)

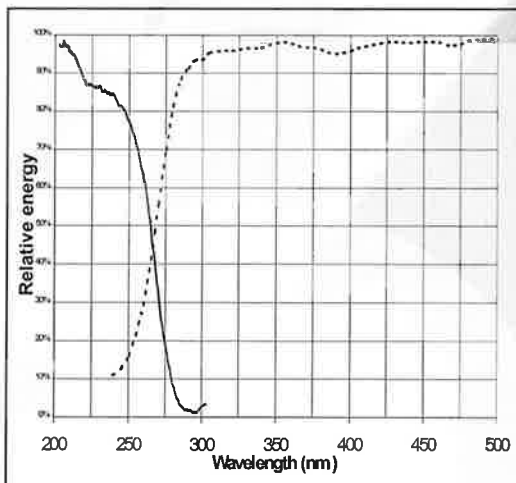
- nominal 2568 lm

PHYSICAL CHARACTERISTICS

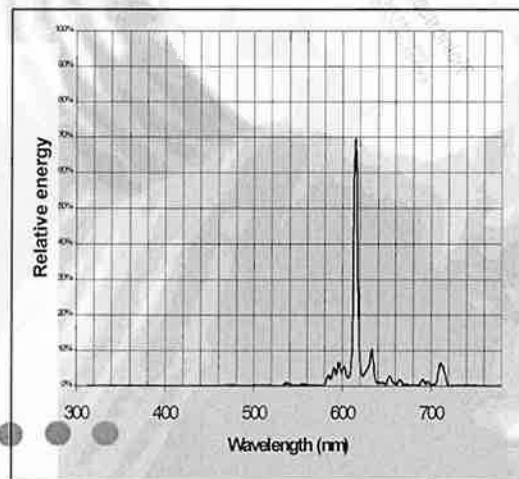
Body colour	white
Specific gravity	5.00
Particle size distribution	by laserdiffraction (Sympatec - HELOS)
• fraction ≤ 1.8 µm	9.0 ± 4.0 %
• fraction ≤ 6.0 µm	60.0 ± 15.0 %
• fraction ≤ 12,5 µm	≥ 95.0 %
• fraction ≤ 25.0 µm	100 %
Cristal structure	Bixbyte

GRAPHICS

— Excitation Spectrum
 - - - Reflection Spectrum



Emission Spectrum



Identification: 1322 527 36201.CA DATE NEW: 2001-10-24 DATE OLD: 1999-07-16

Let's make things better.

**Philips
Lighting**



PHILIPS

Fluorescent powder U771

GENERAL

Name	Barium Magnesium Aluminate:Eu fine ED
Chemical formula	BaMgAl ₁₀ O ₁₇ :Eu
Application	Blue component tri-band phosphor mix for high colour rendering
fluorescent	
Processing	lamps (Ra > 80) and compact fluorescent lamps
Suspension type	Stirrer
Ordering/Packaging	Butylacetate or water
	Codenumber 1322 527 45102: 25 kg in 50 ltr steel drum

OPTICAL CHARACTERISTICS

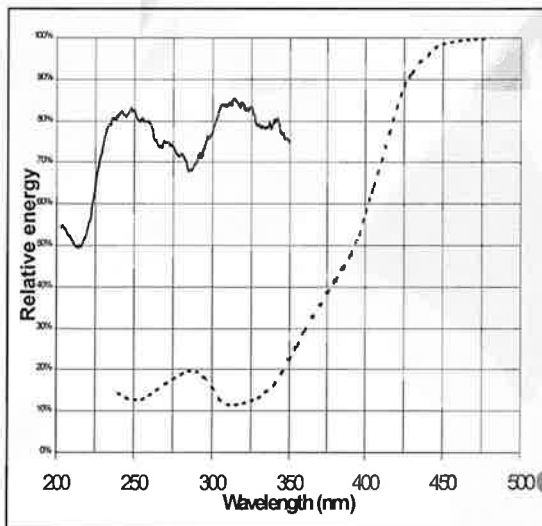
254 nm excitation		
• quantum efficiency		93 %
• UV-absorption		86 %
• wavelength at peak		453 nm
• bandwidth (50 %)		51 nm
• excitation peak		313 nm
C.I.E chromaticity coordinates		
• powder	x = 0.148	y = 0.068
• lamp TLD 36 W	x = 0.153	y = 0.069
Lumen output 100 h (TLD36W)		
• nominal		929 lm

PHYSICAL CHARACTERISTICS

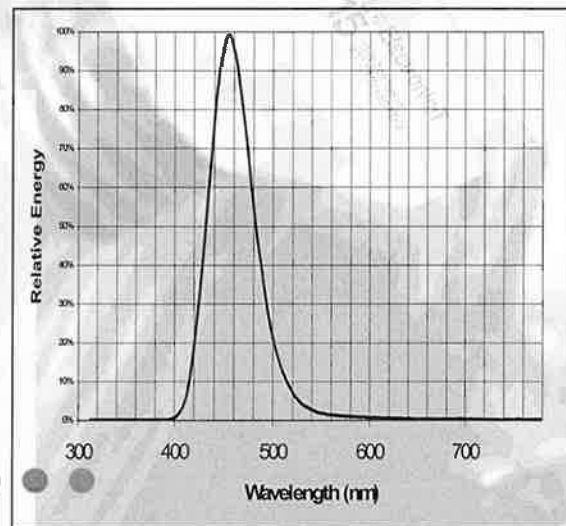
Body colour	white
Specific gravity	3.80
Particle size distribution	by laserdiffraction (Sympatec - HELOS)
• fraction ≤ 1.8 µm	≤ 12.0 %
• fraction ≤ 6.0 µm	37,5 ± 7.5 %
• fraction ≤ 30.0 µm	100 %
Crystal structure	β alumina

GRAPHICS

— Excitation Spectrum
 - - - - Reflection Spectrum



Emission Spectrum



Identification: 1322 527 45101(CA) DATE NEW: 2001-10-24 (DATE OLD: 1999-07-16)

Let's make things better.

Fluorescent powder U772

GENERAL

Name	Cerium Magnesium Aluminate:Tb fine ED
Chemical formula	(Ce,Tb)MgAl ₁₁ O ₁₉
Application	Green component tri-band phosphor mix high colour rendering fluorescent lamps (Ra > 80)
Processing	Stirrer
Suspension type	Butylacetate or water
Ordering/Packaging	Codenummer 1322 527 46402: 35 kg in 50 ltr steel drum

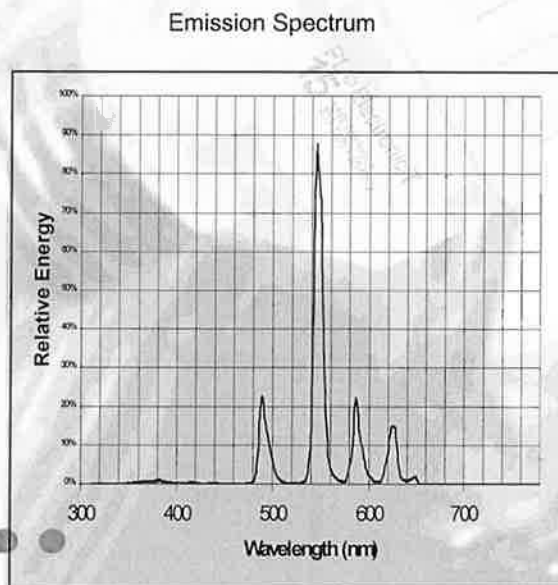
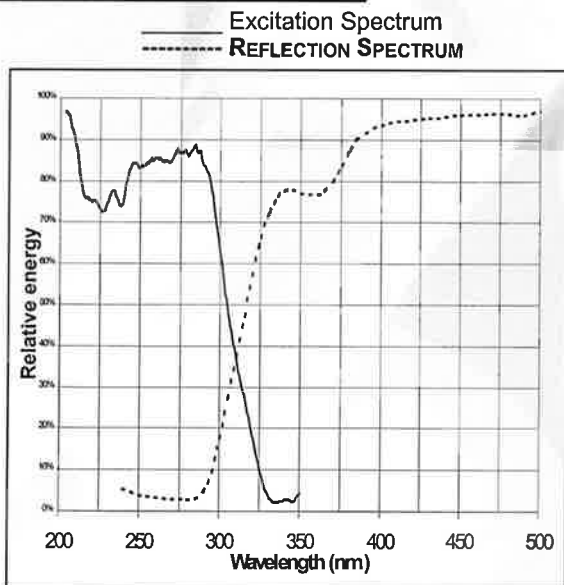
OPTICAL CHARACTERISTICS

254 nm excitation		
• quantum efficiency	91 %	
• UV-absorption	93 %	
• wavelength at peak	542 nm	
• bandwidth (50 %)	8 nm	
• excitation peak	281 nm	
C.I.E chromaticity coordinates		
• powder	x = 0.350	y = 0.382
• lamp TLD 36 W	x = 0.311	y = 0.543
Lumen output 100 h (TLD36W)		
• nominal	4600 lm	

PHYSICAL CHARACTERISTICS

Body colour	white
Specific gravity	4.10
Particle size distribution	by laserdiffraction (Sympatec - HELOS)
• fraction ≤ 1.8 µm	11.0 ± 5.0 %
• fraction ≤ 6.0 µm	50.0 ± 20.0 %
• fraction ≤ 21.0 µm	100.0 %
Crystal structure	Magnetoplumbite

GRAPHICS



Identification: 1322 527 46401(CA) DATE NEW: 2001-10-24 DATE OLD: 2000-04-13

Let's make things better.

**Philips
Lighting**



PHILIPS

Fluorescent powder U1225

GENERAL

Name	Cool white fine, colour temperature 4000 K
Chemical formula	$\text{Ca}_{10}(\text{PO}_4)_6(\text{F},\text{Cl})_2:\text{Sb},\text{Mn}$
Application	Standard fluorescent lamps
Processing	Stirrer or ball mill
Suspension type	Butyl acetate or water
Ordering/Packaging	Codenummer 1322 526 10802: 45 kg in 50 ltr steel drum

OPTICAL CHARACTERISTICS

254 nm excitation	
• quantum efficiency	77 %
• UV-absorption	88 %
• wavelength at peak	580 nm
• bandwidth (50 %)	173 nm
• excitation peak	203 nm
C.I.E chromaticity coordinates	
• powder	x = 0.416 y = 0.417
• lamp TLD 36 W	x = 0.375 y = 0.378
Lumen output 50 h (TLD36W)	
• nominal	2845 lm

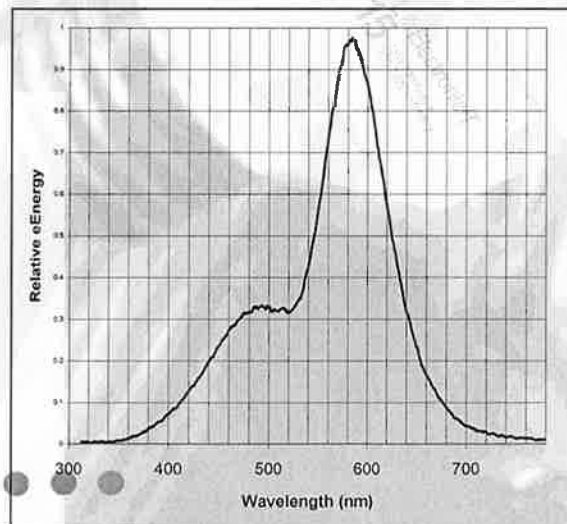
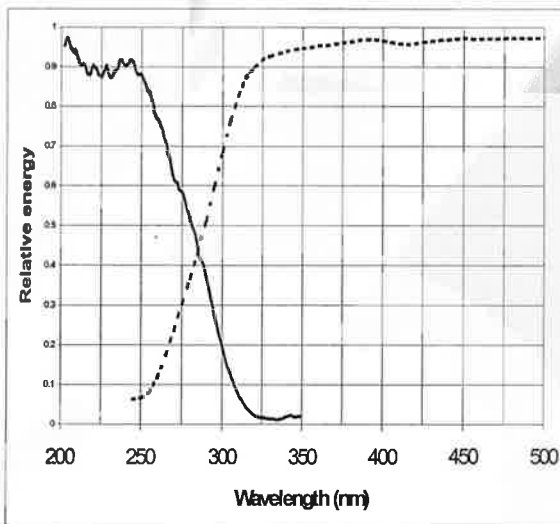
PHYSICAL CHARACTERISTICS

Body colour	white
Specific gravity	3.20
Particle size distribution	by laserdiffraction (Sympatec - HELOS)
• fraction $\leq 1.1 \mu\text{m}$	$3.5 \pm 2.4 \%$
• fraction $\leq 6.0 \mu\text{m}$	$24.0 \pm 5.0 \%$
• fraction $\leq 12.5 \mu\text{m}$	$74.0 \pm 7.5 \%$
• fraction $\leq 25.0 \mu\text{m}$	$\geq 97.0 \%$
Crystal structure	apatite

GRAPHICS

— Excitation Spectrum
 - - - - Reflection Spectrum

Emission Spectrum



Identification: 1322 526 10801 (CA) DATE NEW: 2001-10-24 (DATE OLD: 1998-04-01)

Let's make things better.

**Philips
Lighting**



PHILIPS

Fluorescent powder U1228

GENERAL

Name	White fine, colour temperature 3500 K
Chemical formula	$\text{Ca}_{10}(\text{PO}_4)_6(\text{F}, \text{Cl})_2:\text{Sb}, \text{Mn}$
Application	Standard fluorescent lamps
Processing	Stirrer or ball mill
Suspension type	Butylacetate or water
Ordering/Packaging	Codenummer 1322 526 19302: 45 kg in 50 ltr steel drum

OPTICAL CHARACTERISTICS

254 nm excitation

- quantum efficiency 81 %
- UV-absorption 90 %
- wavelength at peak 585 nm
- bandwidth (50 %) 75 nm
- excitation peak 203 nm

C.I.E chromaticity coordinates

- powder x = 0.445 y = 0.427
- lamp TLD 36 W x = 0.403 y = 0.391

Lumen output 50-h (TLD36W)

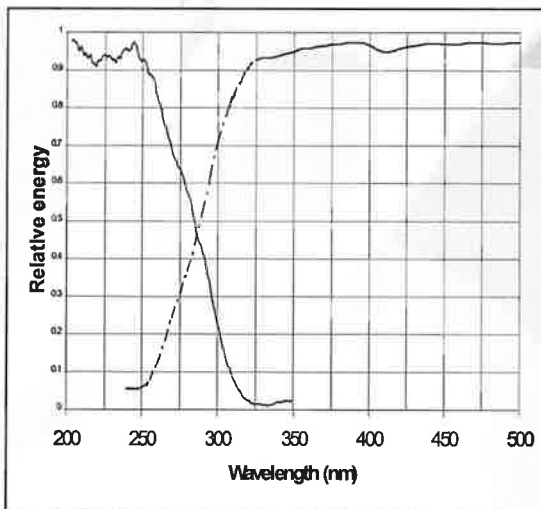
- nominal 2851 lm

PHYSICAL CHARACTERISTICS

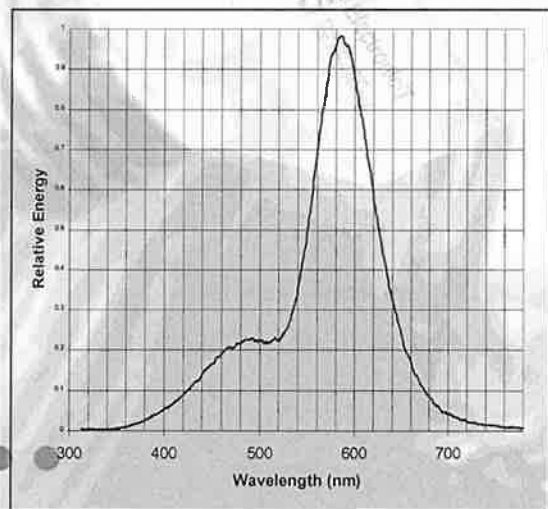
Body colour	white
Specific gravity	3.20
Particle size distribution	by laserdiffraction (Sympatec - HELOS)
• fraction $\leq 1.1 \mu\text{m}$	$3.5 \pm 2.4 \%$
• fraction $\leq 6.0 \mu\text{m}$	$24.0 \pm 5.0 \%$
• fraction $\leq 12.5 \mu\text{m}$	$74.0 \pm 7.5 \%$
• fraction $\leq 25.0 \mu\text{m}$	$\geq 97.0 \%$
Crystal structure	apatite

GRAPHICS

— Excitation Spectrum
 - - - - Reflection Spectrum



Emission Spectrum



Identification: 1322 526 19301 (CA) DATE NEW: 2001-10-24 (DATE OLD: 1999-07-15).

Let's make things better.

**Philips
Lighting**



PHILIPS

Fluorescent powder U1230

GENERAL

Name	Warm white fine, colour temperature 2900 K
Chemical formula	$\text{Ca}_{10}(\text{PO}_4)_6(\text{F}, \text{Cl})_2:\text{Sb}, \text{Mn}$
Application	Standard fluorescent lamps (26 mm tube diameter)
Processing	Stirrer or ball mill
Suspension type	Butylacetate or water
Ordering/Packaging	Codenummer 1322 526 19702: 45 kg in 50 ltr steel drum

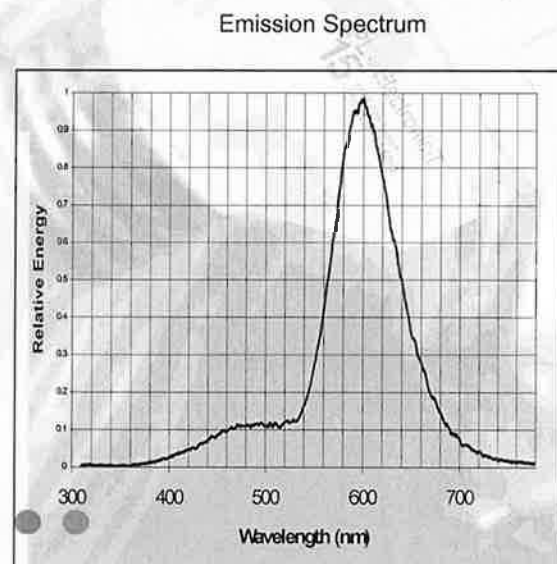
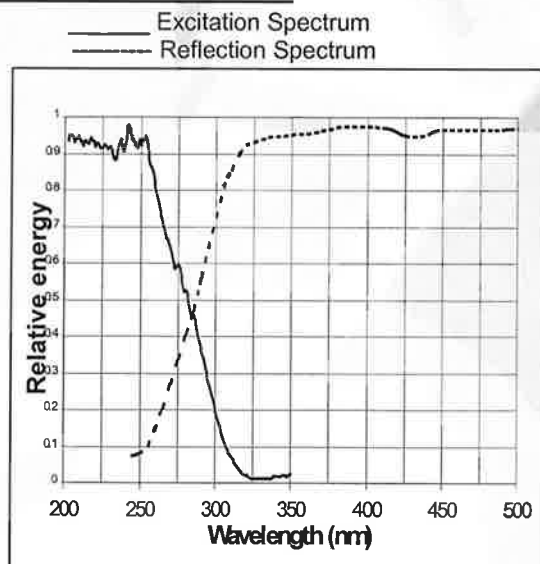
OPTICAL CHARACTERISTICS

254 nm excitation		
• quantum efficiency		80 %
• UV-absorption		90 %
• wavelength at peak		600 nm
• bandwidth (50%)		76 nm
• excitation peak		241 nm
C.I.E chromaticity coordinates		
• powder	x = 0.512	y = 0.410
• lamp TLD 36 W	x = 0.440	y = 0.400
Lumen output 50 h (TLD36W)		
• nominal		2915 lm

PHYSICAL CHARACTERISTICS

Body colour	white
Specific gravity	3.20
Particle size distribution	by laserdiffraction (Sympatec - HELOS)
• fraction $\leq 1.1 \mu\text{m}$	$3.5 \pm 2.4 \%$
• fraction $\leq 6.0 \mu\text{m}$	$24.0 \pm 5.0 \%$
• fraction $\leq 12.5 \mu\text{m}$	$74.0 \pm 7.5 \%$
• fraction $\leq 25.0 \mu\text{m}$	$\geq 97.0 \%$
Crystal structure	apatite

GRAPHICS



Identification: 1322 526 19701 (CA) DATE NEW: 2001-10-24 (DATE OLD: 1999-07-15)

Let's make things better.

Philips
Lighting



PHILIPS

Fluorescent powder U1232

GENERAL

Name	Warm white fine, colour temperature 2900 K
Chemical formula	$\text{Ca}_{10}(\text{PO}_4)_6(\text{F},\text{Cl})_2:\text{Sb},\text{Mn}$
Application	Standard fluorescent lamps (38 mm tube diameter)
Processing	Stirrer or ball mill
Suspension type	Butylacetate or water
Ordering/Packaging	Codenummer 1322 526 20102: 45 kg in 50 ltr steel drum

OPTICAL CHARACTERISTICS

254 nm excitation

- quantum efficiency 80 %
- UV-absorption 89 %
- wavelength at peak 600 nm
- bandwidth (50 %) 76 nm
- excitation peak 241 nm

C.I.E chromaticity coordinates

- powder x = 0.512 y = 0.410
- lamp TLD 36 W x = 0.431 y = 0.398

Lumen output 50 h (TLD36W)

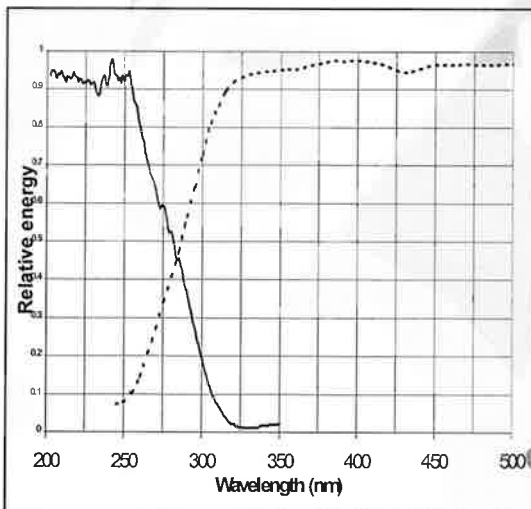
- nominal 2915 lm

PHYSICAL CHARACTERISTICS

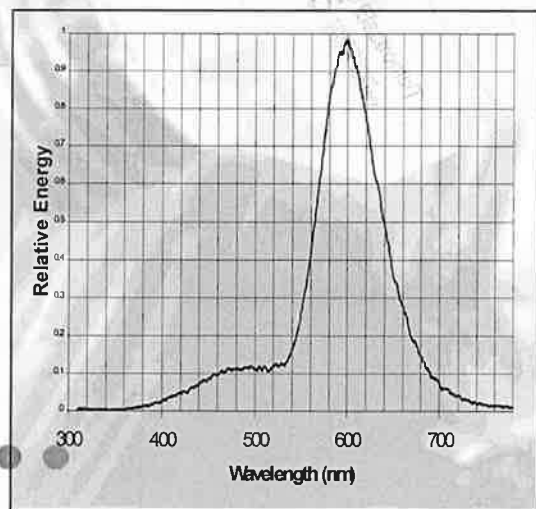
Body colour	white
Specific gravity	3.20
Particle size distribution	by laserdiffraction (Sympatec - HELOS)
• fraction $\leq 1.1 \mu\text{m}$	$3.5 \pm 2.4 \%$
• fraction $\leq 6.0 \mu\text{m}$	$24.0 \pm 5.0 \%$
• fraction $\leq 12.5 \mu\text{m}$	$74.0 \pm 7.5 \%$
• fraction $\leq 25.0 \mu\text{m}$	$\geq 97.0 \%$
Crystal structure	apatite

GRAPHICS

———— Excitation Spectrum
 - - - - - Reflection Spectrum



Emission Spectrum



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Fluorescent powder U1239

GENERAL

Name	Cool Daylight, colour temperature 6500 K
Chemical formula	$\text{Ca}_{10}(\text{PO}_4)_6(\text{F},\text{Cl})_2:\text{Sb},\text{Mn}$
Application	Standard fluorescent lamps
Processing	Stirrer
Suspension type	Butylacetate or water
Ordering/Packaging	Codenummer 1322 526 86502: 45 kg in 50 ltr steel drum

OPTICAL CHARACTERISTICS

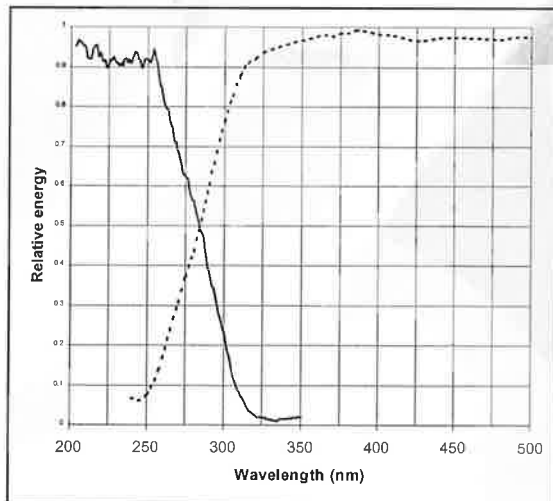
254 nm excitation		
• quantum efficiency	80 %	
• UV-absorption	86 %	
• wavelength at peak	587 nm	
• bandwidth (50%)	192 nm	
• excitation peak	214 nm	
C.I.E chromaticity coordinates		
• powder	x = 0.356	y = 0.377
• lamp TLD 36 W	x = 0.315	y = 0.341
Lumen output 50 h (TLD36W)		
• nominal	2500 lm	

PHYSICAL CHARACTERISTICS

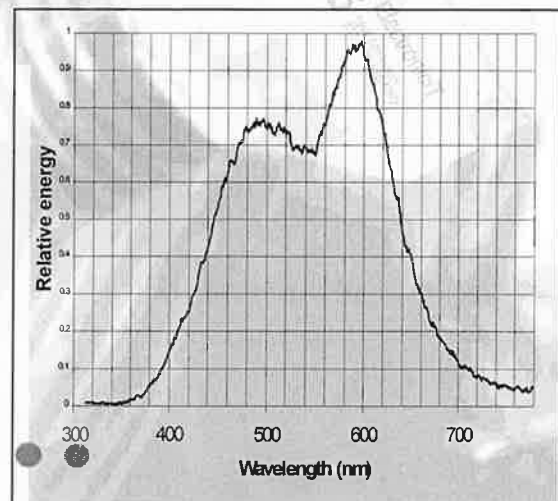
Body colour	white
Specific gravity	3.20
Particle size distribution	by laserdiffraction (Sympatec - HELOS)
• fraction $\leq 1.1 \mu\text{m}$	$3.0 \pm 2.4 \%$
• fraction $\leq 6.0 \mu\text{m}$	$22.5 \pm 5.0 \%$
• fraction $\leq 12.5 \mu\text{m}$	$74.0 \pm 7.5 \%$
• fraction $\leq 25.0 \mu\text{m}$	$\geq 97.0 \%$
Crystal structure	apatit

GRAPHICS

————— Excitation Spectrum
 - - - - - Reflection Spectrum



Emission Spectrum



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