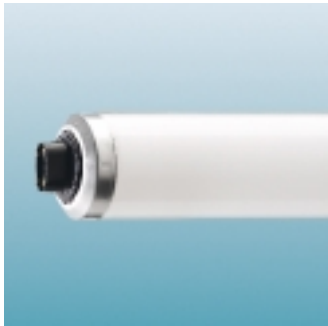


Special fluorescent lamps

Medical/therapy



'TL' 20/40W



'TL' 100W



PL-S 9W

Low-pressure mercury vapour fluorescent lamps emitting radiation for therapeutic and other applications. The compact, single-ended PL-S 9W/12 2P contain, built into the lamp base, a specially adapted starter, which provides almost instant starting characteristics. The PL-S 9W/12 lamps have the same lamp caps and can operate on the same universal ballasts as PL-S 9W lamps for general lighting. The tubular 'TL' 20W/01, /12 RS and 'TL' 40W/12 RS lamps can be operated in normal switch-start as well as pre-heat rapid-start systems.

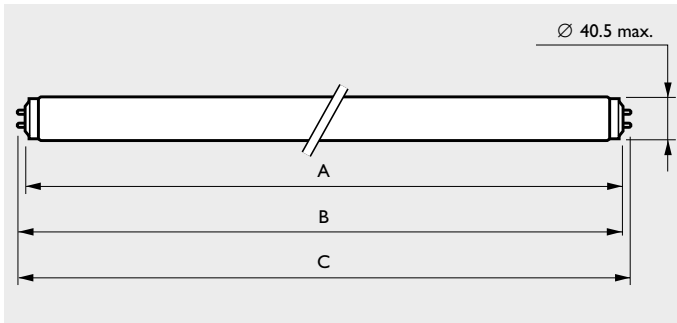
In medical applications, the /01 and /12 lamps are mainly used for the treatment of psoriasis; /52 lamps are mainly used for the treatment of hyperbilirubinaemia.

Note

UV-B radiation is harmful to human skin and eyes. These lamps are therefore only available for medical and industrial applications.

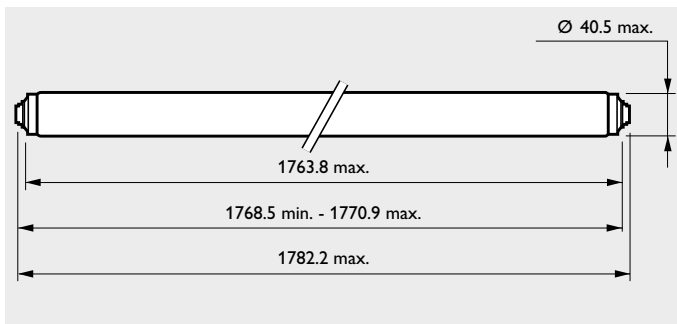
Applications

- /01, /12
Phototherapy in dermatology (psoriasis, SUP).
- /12
Meteorological testing equipment.
- /52
Medical treatment of jaundice in new-born babies (hyperbilirubinaemia).

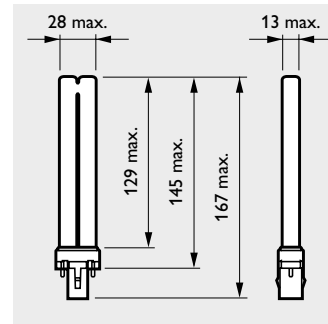


Type	A max.	B min.	B max.	C max.
'TL' 20W 01/12 RS	589.8	594.5	596.9	604.0
'TL' 40W /12 RS	1199.4	1204.1	1206.5	1213.6
'TL' 20W /52	589.8	594.5	596.9	604.0

Dimensions in mm



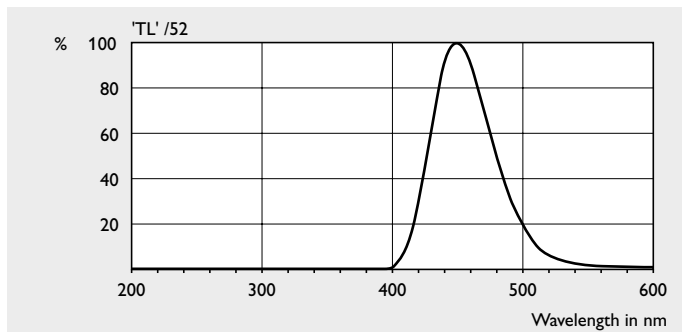
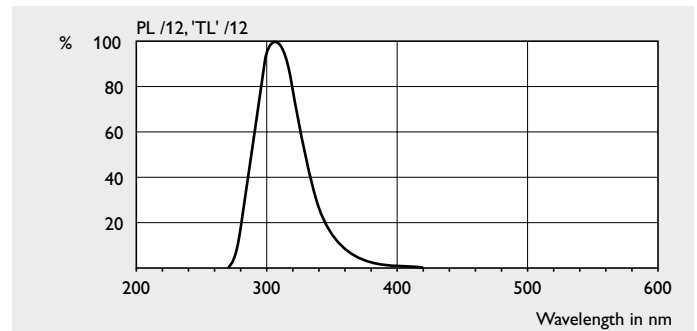
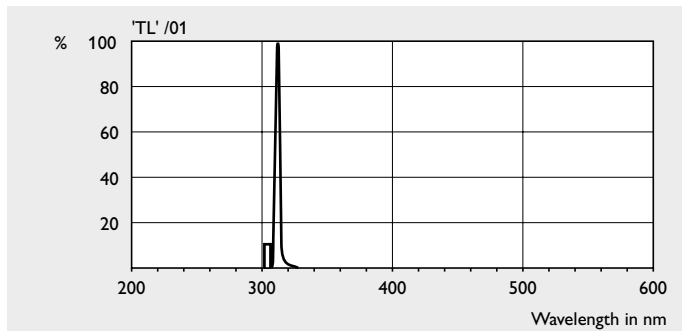
'TL' 100W /01/12



PL-S 9W /12 G23



Type	Cap/ base	Lamp voltage V	Lamp current A	Lamp wattage W	Colour designation	UV-B radiation W	Useful life h	Depreciation 2000 hrs %	Nett weight g	Ordering number	EOC
/01											
'TL'20W /01RS	G13	57	0.37	20	UV-B	1.90	3000	20	156	9280 100 00100	639745
'TL'100W /01	R17D	122	0.97	100	UV-B	15	3000	20	410	9280 349 00100	614254
/12											
'TL'20W /12RS	G13	57	0.37	20	UV-B	1.80	3000	20	156	9280 100 01200	628831
'TL'40W /12RS	G13	101	0.43	40	UV-B	4.50	3000	20	292	9280 113 01200	628862
'TL'100W /12	R17D	122	0.97	100	UV-B	11	2000	20	410	9280 349 01200	614285
PL-S9W /12	G23	60	0.17	9	UV-B	0.75	3000		41	9279 017 01200	626257
/52											
'TL'20W /52	G13	57	0.37	20	MEDICAL		2000	20	156	8222 206 80700	612205



Spectral power distributions

OL754 TEST DATA

DESCRIPTION: STD CURVE FOR XGS - 100W, NON-REFL
 LAMP NO: AVG (N = 9) AGE: +
 OL SCAN NO: N/A

MEASURED ON COSMOPower S 100W (#3917) AT 220V PRI

12" SECTION AT 12" DISTANCE

SLITS: 0.25/1.0/0.25 CAL FILE: N/A

LAMP ELECTRICALS: 864 mA 120.6 V 90.0 W 73.0 °F
 PRIMARY ELECTRICALS: 864 mA 220 V 109.0 W

FOR USA RANGES:

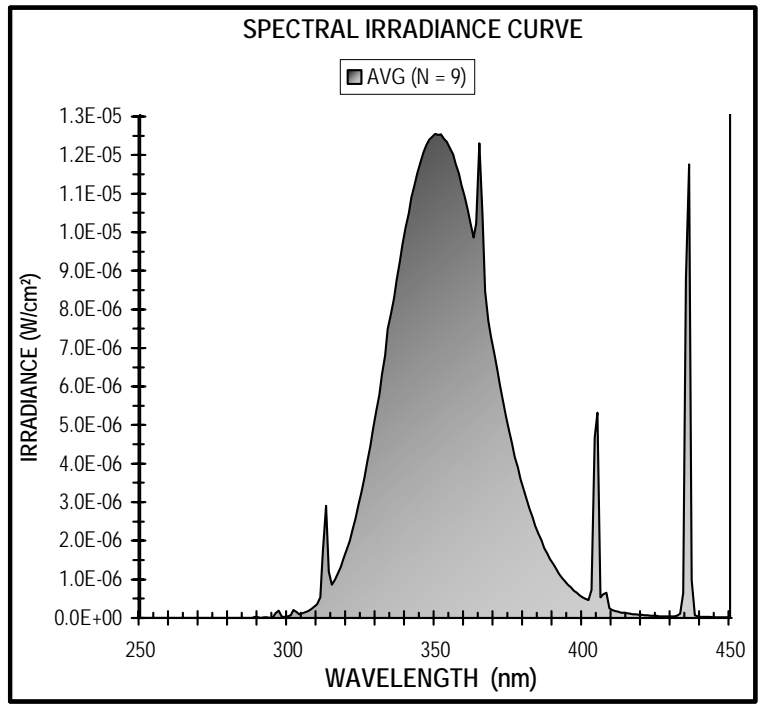
UV A (320 - 400nm) 525.22 $\mu\text{W} / \text{cm}^2$
 UV B (280 - 320nm) 15.44 $\mu\text{W} / \text{cm}^2$
 UVB / UVA RATIO 2.94 %

FOR EUROPEAN RANGES:

UV A (315 - 400nm) 531.53 $\mu\text{W} / \text{cm}^2$
 UV B (280 - 315nm) 9.13 $\mu\text{W} / \text{cm}^2$
 UVB / UVA RATIO 1.72 %

ΣViRi 2.230 $\mu\text{W} / \text{cm}^2$
 Te 2.798 $\times 10^4$ sec
 ΣJiRi 2.320 $\mu\text{W} / \text{cm}^2$
 Tm 7.913 $\times 10^4$ sec
 .75 MED 87.434 minutes

PHOSPHOR PEAK 350 nm
 HALF POWER POINTS 332.5 / 371.5 nm
 BAND WIDTH 39.0 nm



OUTPUT BY REGIONS:

WAVELENGTH RANGE (nm)	IRRADIANCE SUMMATIONS $\mu\text{W} / \text{cm}^2$	ViRi SUMMATIONS $\mu\text{W} / \text{cm}^2$	JiRi SUMMATIONS $\mu\text{W} / \text{cm}^2$	DIN ERYTH SUMMATIONS $\mu\text{W} / \text{cm}^2$	DIN PIGM SUMMATIONS $\mu\text{W} / \text{cm}^2$
US RANGES:					
UVA TOTAL: 320 - 400	525.224	0.485	0.727	0.041	458.652
UVA 1: 340 - 400	413.696	0.274	0.361	0.000	350.895
UVA 2: 320 - 340	111.528	0.211	0.366	0.041	107.757
UVB TOTAL: 280 - 320	15.445	1.746	1.593	0.984	9.464
UVB 1: 302 - 320	14.772	1.073	0.970	0.465	9.448
UVB 2: 280 - 302	0.673	0.673	0.623	0.520	0.016
EUROPEAN RANGES:					
UVA TOTAL: 315 - 400	531.535	0.592	0.853	0.087	463.378
UVB TOTAL: 280 - 315	9.134	1.639	1.467	0.938	4.738

OL754 TEST DATA

DESCRIPTION: UBL FSX72T12/UVB/HO (p/n 16608, 04-18023)
 LAMP NO: XIVK-28-1 AGE: 55' + 26'
 OL SCAN NO: 063004a

MEASURED ON COSMOPOWER S 100W (#3917) AT 220V PRI

12" SECTION AT 12" DISTANCE

SLITS: 0.25/1.0/0.25 CAL FILE: fs55001e.cal

LAMP ELECTRICALS: 863 mA 120.4 V 91.0 W 75.0 °F
 PRIMARY ELECTRICALS: 863 mA 220 V 106.0 W

FOR USA RANGES:

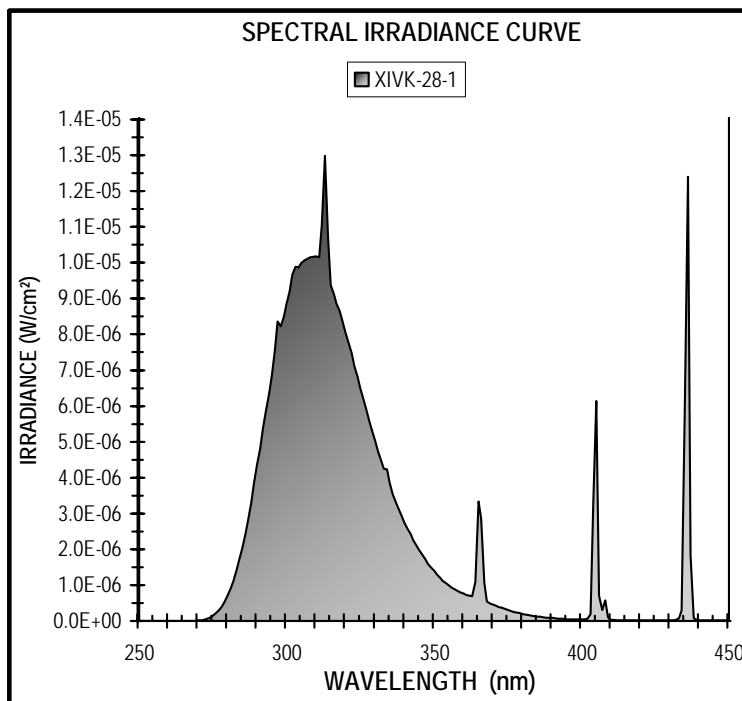
UV A (320 - 400nm) 150.73 $\mu\text{W} / \text{cm}^2$
 UV B (280 - 320nm) 287.57 $\mu\text{W} / \text{cm}^2$
 UVB / UVA RATIO 190.78 %

FOR EUROPEAN RANGES:

UV A (315 - 400nm) 194.40 $\mu\text{W} / \text{cm}^2$
 UV B (280 - 315nm) 243.89 $\mu\text{W} / \text{cm}^2$
 UVB / UVA RATIO 125.46 %

ΣViRi 147.327 $\mu\text{W} / \text{cm}^2$
 T_e 0.042 $\times 10^4$ sec
 ΣJiRi 132.005 $\mu\text{W} / \text{cm}^2$
 T_m 0.139 $\times 10^4$ sec
 .75 MED 1.324 minutes

PHOSPHOR PEAK 310 nm
 HALF POWER POINTS 291.5 / 330.0 nm
 BAND WIDTH 38.5 nm



OUTPUT BY REGIONS:

WAVELENGTH RANGE (nm)	IRRADIANCE SUMMATIONS $\mu\text{W} / \text{cm}^2$	ViRi SUMMATIONS $\mu\text{W} / \text{cm}^2$	JiRi SUMMATIONS $\mu\text{W} / \text{cm}^2$	DIN ERYTH SUMMATIONS $\mu\text{W} / \text{cm}^2$	DIN PIGM SUMMATIONS $\mu\text{W} / \text{cm}^2$
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US RANGES:

UVA TOTAL: 320 - 400	150.730	0.335	0.638	0.101	137.630
UVA 1: 340 - 400	47.213	0.035	0.047	0.000	41.886
UVA 2: 320 - 340	103.517	0.300	0.591	0.101	95.744
UVB TOTAL: 280 - 320	287.568	146.992	131.367	87.548	91.416
UVB 1: 302 - 320	178.534	37.957	37.310	16.493	90.326
UVB 2: 280 - 302	109.035	109.035	94.057	71.054	1.089

EUROPEAN RANGES:

UVA TOTAL: 315 - 400	194.403	1.155	1.560	0.452	169.893
UVB TOTAL: 280 - 315	243.895	146.172	130.445	87.196	59.153