DECOSTAR 35/35S

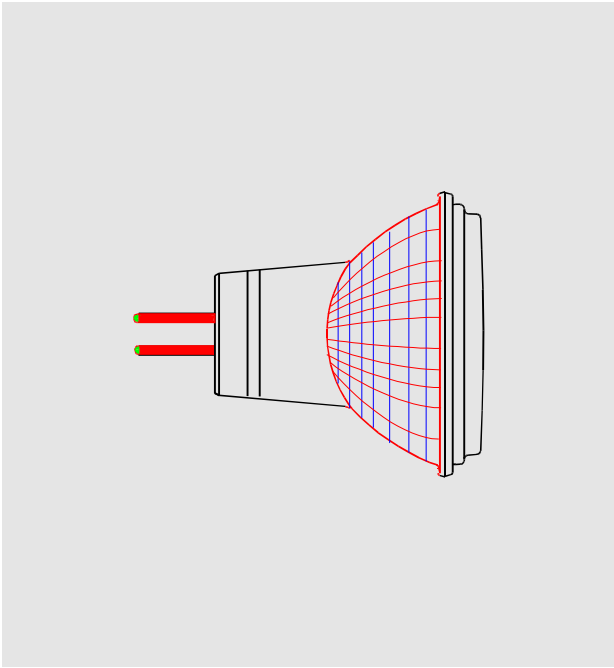
Product characteristics

■ Reduction of the heat load in the light by approx. 66%

■ Burner with UV-STOP glass: Falls within the lowest UV protection thresholds (NIOSH) even for unshielded lamps.
Reduction of bleaching up to 50%

■ New reflector design optimized to axial filament for advanced light distribution

■ GU-base for safer mechanical grip and easier replacement



Range

order-code 35/35S[1]	ILCOS-code[2]	Voltage	Wattage	Beam angle	Luminous intensity[3]	Lamp life[4]
41/44890 SP	HRG20-12-GU4-35/10	12V	20 W	10°	5000 cd	2000 h
WFL	HRG20-12-GU4-35/38	"	"	38°	680 cd	"
41/44892 SP	HRG35-12-GU4-35/10	"	35W	10°	6500 cd	3000 h
WFL	HRG35-12-GU4-35/38	"	"	38°	1100 cd	"

1) e.g. "41890 SP"- lamp without lens, "44890 SP"- with lens
2) for lamps with lens 4489... HRGI xx-xx-GU4-35/x
e.g. for 44890 SP HRGI20-12-GU4-35/10
3) Values valid for lamps without lens
Lamps with cover glass: ~ 12% less
4) Lamp life according to IEC 64 (truncated life)

Base

GU 4 (acc. IEC 61)

DECOSTAR 35/35S

Electrical data

Power consumption

20W	35W
21,1± 0,4W	36,7± 1,1W

obliging: nominal value +8% acc. IEC 357

Dimmability 100%

Photometrical data

Luminous intensity average value see "range"

Minimum axial luminous iintensity

	SP	WFL
20 W	3500 cd	550 cd
35 W	4000 cd	900 cd

Maintenance Decrease of luminous intensity < 50 % to 70 % of nominal life

Deviation between max. intensity and lamp axis 6° max.

beam angle tolerance

	SP	WFL
20 W	7°-**9°**-11°	32°-**36°**-40°
35 W	9°-**11°**-13°	34°-**38°**-42°

beam angle

10% of max. intensity

20 W	23°	50°
35 W	21°	58°

Light distribution see page 3-5
Data are measurements on single lamp samples out of the photometrical database OSRAM PHODAT; figures can therefore slightly divert from the mean values mentioned in page 3-8 of this technical information but the values are inside the given tolerances

Illuminance see page 3-5
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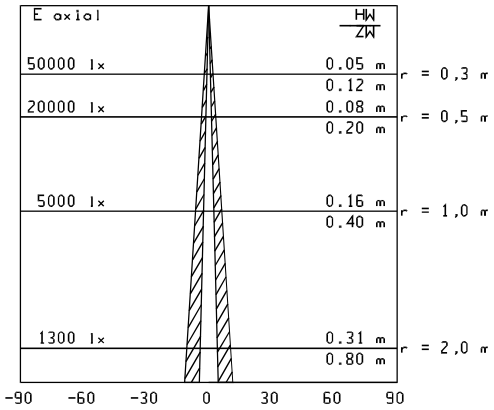
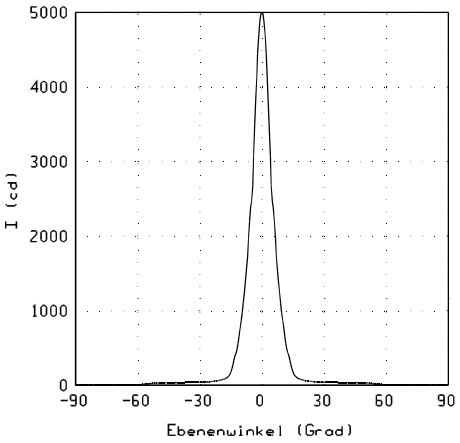
DECOSTAR 35/35S

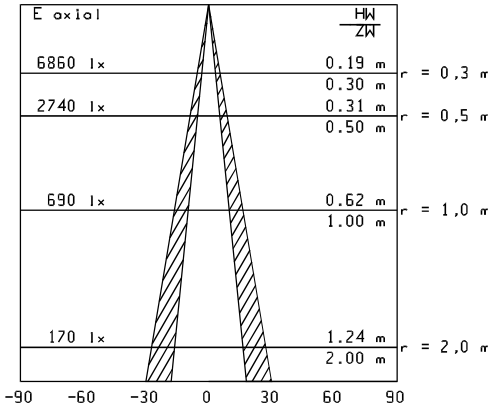
Illuminance



Light distribution



41890 SP



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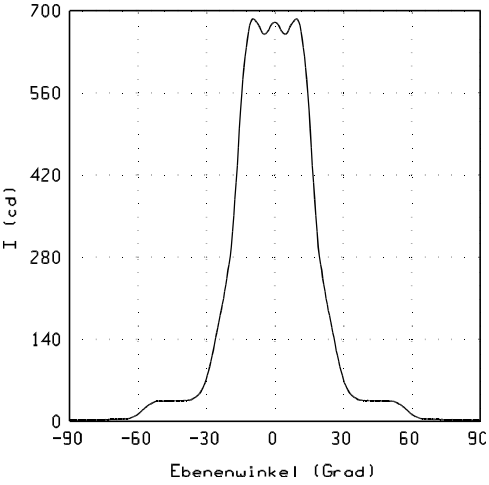


41890 WFL

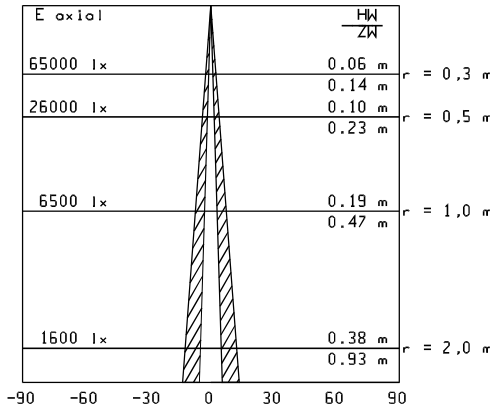
41890 WFL

Eaxial: Axial/peak illuminance at distance r
HW: ∅ of the illuminated area within the intensity is >= 50% of peak value in distance r
ZW: ∅ of the illuminated area within the intensity is >= 10% of peak value in distance r

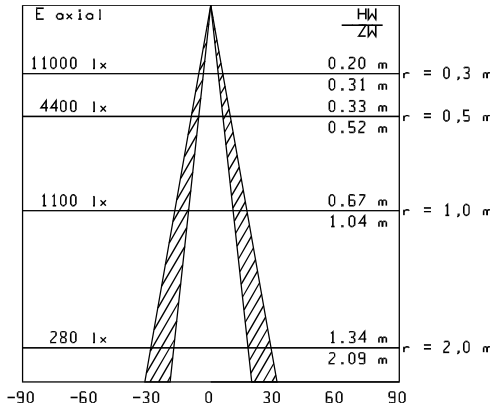
Values for luminous intensity/illuminance are 12% less for lamps with lens (448.....)

DECOSTAR 35/35S

Illuminance

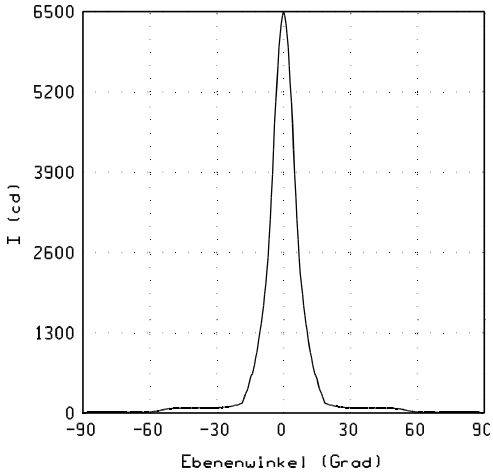


41892 SP

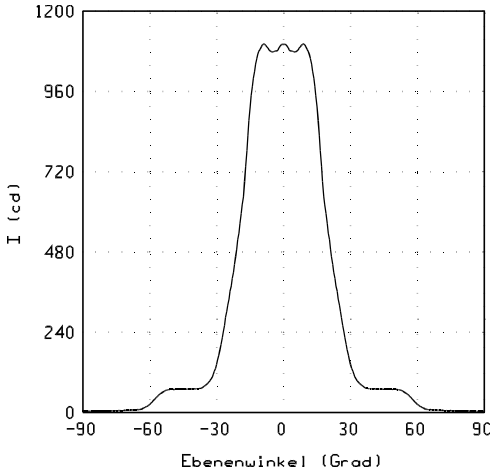


41892 WFL

Light distribution



41892 SP



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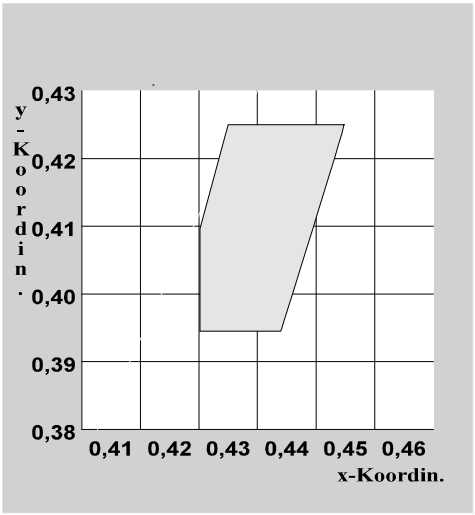
Spectral data

Colour temperature ~ 3100 K (for exact specication see tolerance extent)

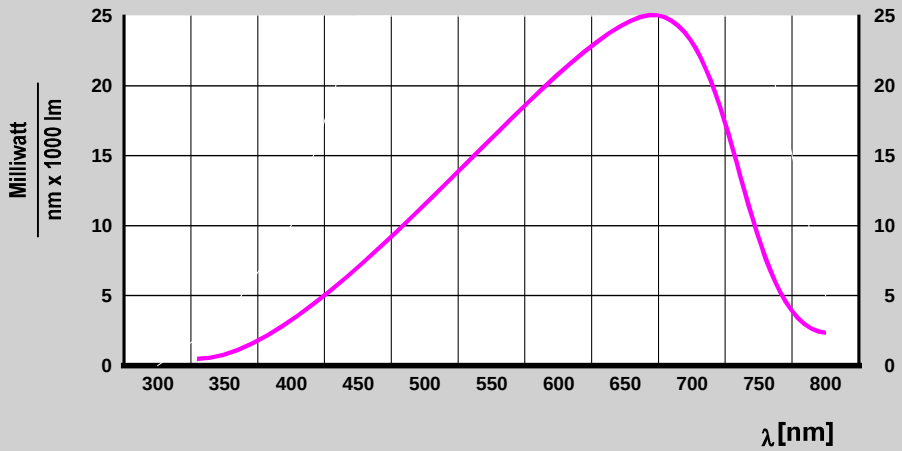
Colour coordinates **for the light emitted infront** **light through the back of the reflector**

Tolerance extent



Due to a strong dependence of the colour appearance on the view angle (different colours at different positions on the reflectors), no useful colour coordinates can be defined.

Spectral distribution visible light



DECOSTAR 35 12V/35W UV-STOP

DECOSTAR 35/35S

Radiation flux infra red

Effect in beam direction:
Falls within the maximum permitted temperature of 90°C according to IEC 598-1/DIN VDE 0711 at a distance of 30 cm
see "minimum safety distance" p.10

Transmittance through the back of the reflector:
> 90% up to 2500 nm due to cool-beam coating

Radiation flux UV

	UV-C	UV-B	UV-A
20 W	-*	-*	< 10 mW/ 1000 lm
35 W	"	"	< 10 mW/ 1000 lm

***** below measurement threshold (radiant flux $<10^{-6}$ mW)

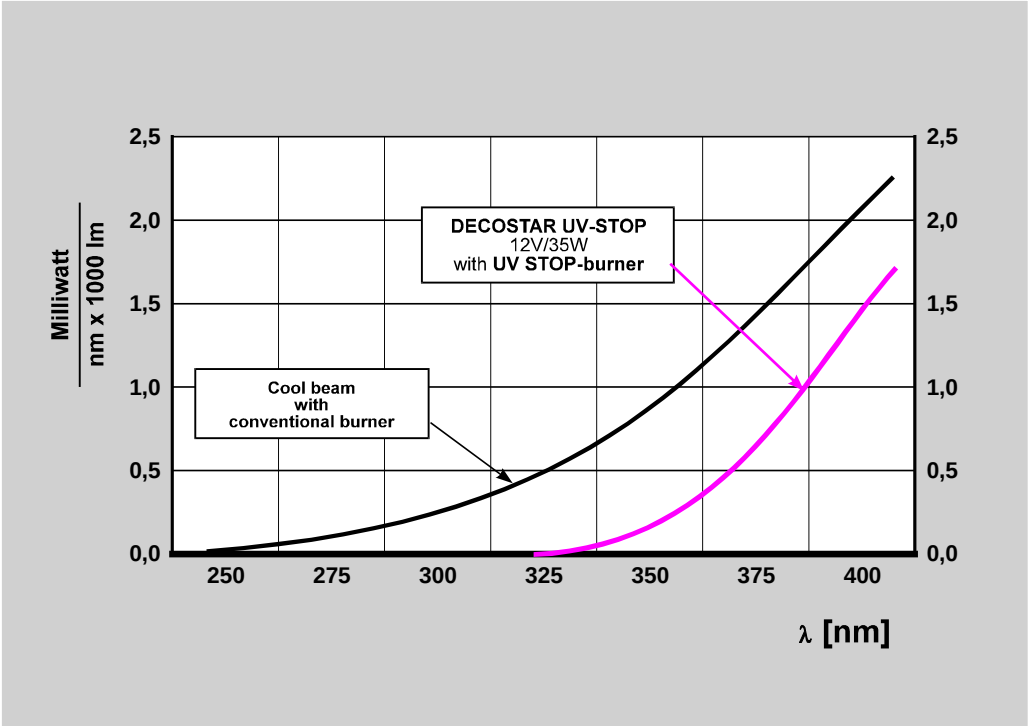
NIOSH/Erythema threshold values

Biologically effective radiation below measurement thresholds (see above figures)

Bleaching

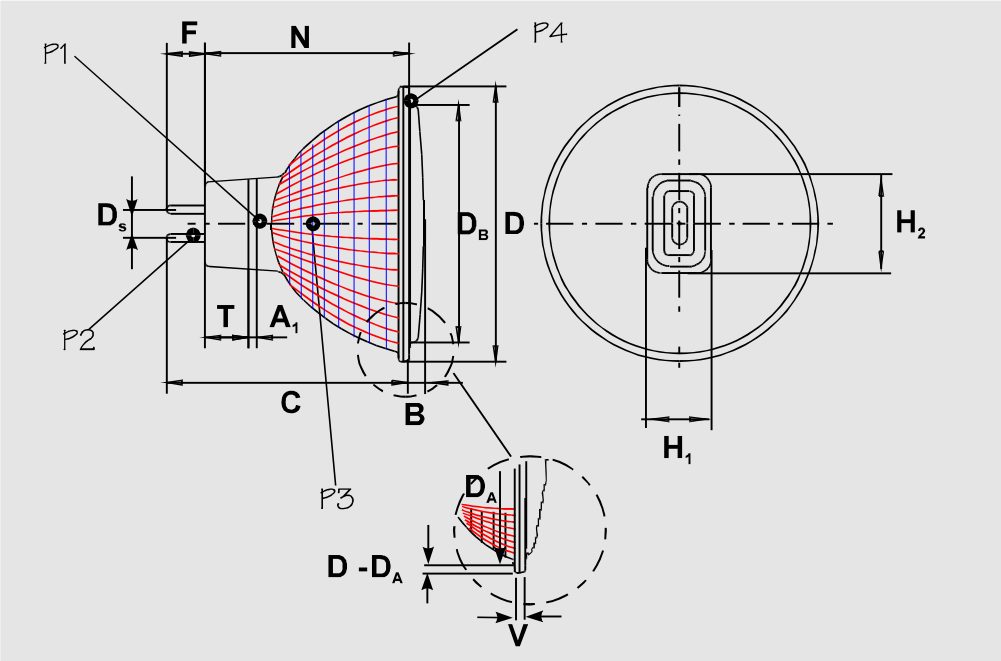
Reduction of up to 50% (depending on the material illuminated) due to UV absorbing quartz glass (in comparison to conventional, non UV-absorbing glass)

Spectral distribution in UV



DECOSTAR 35/35S

Geometry



values in mm	Nomination	DECOSTAR 35/35S	IEC-Norm
Overall length	C	N_{max} + F_{max}	45 max without lens
Projection of lens	B	4 max.	5 max.
Reflector length	N	29,0 ± 0,3	25,0 - 30,0
Reflector diameter	D	34,7 + 0,6	34,3 - 35,3
	D_R	29,4 ± 0,3	33,5 max.
	D_A	32,7 + 0,9	-
Reflector rim thickness	V	1,8 ± 0,2	-
Neck	H_1 x H_2	11,8 max. x 16,6 max. at a distance of 8,5 mm from the neck end	see free space dimensions p.9
Situation of GU slot	T	4,0 ± 0,2	3,7 - 4,3
Depth of GU slot	A	0,7 ± 0,3	0,4 min.
Width of GU slot	A_1	1,5 + 0,5	1,5 min.
Pin length	F	7 ± 0,5	6,0 - 9,0
Distance between pins	Ds (D in IEC61)	4,0 ± 0,1	4
Pin diameter	E	1,0	0,95 - 1,05
Difference in pin length		0,4 max.	via norm gauge
Pin parallelism		via norm gauge	via norm gauge
Out of roundness		via norm gauge	see pin diam. tolerance

Nominations and dimensions acc. IEC 357 ,IEC 61

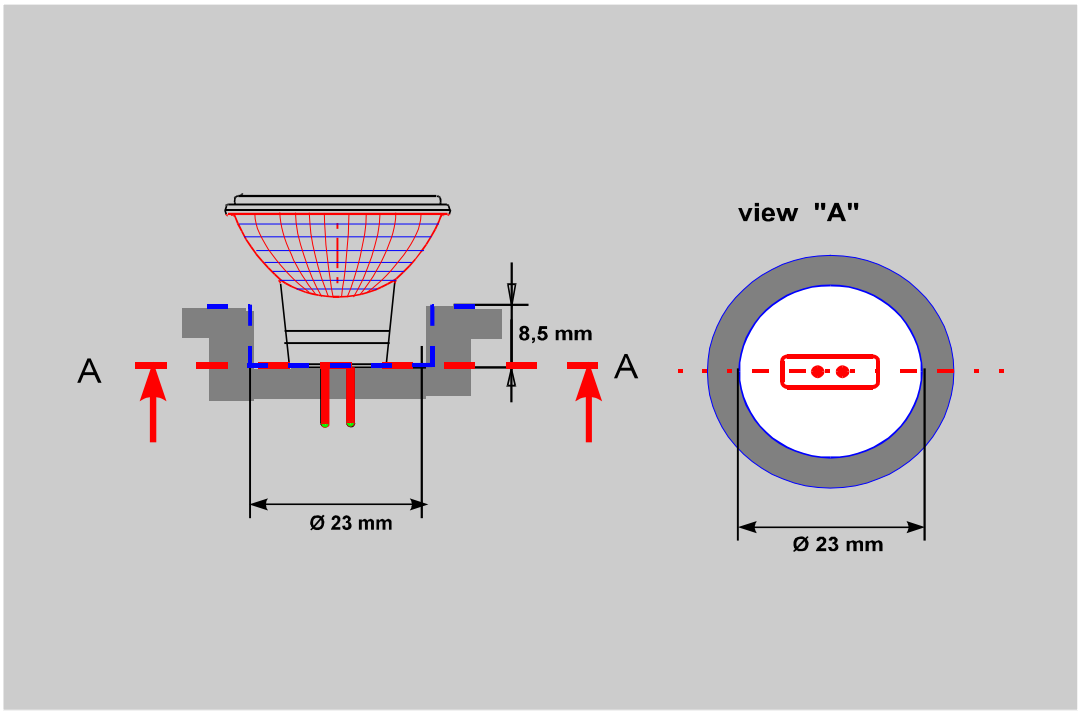
Please note:

Dimensions and tolerances are subject to change within the IEC regulations !

Not explicitly given dimensions can not be evaluated out of measuring lamps samples!

DECOSTAR 35/35S

Free space dimensions



DECOSTAR 35/35S

Operating temperatures

		Pinch	Pin	Reflector	Adhesive joint
Point No.(s. "Geometry")		P1	P2	P3	P4
Burning position		⇓	⇓	⇓	⇓
Temperature [°C]*					
20W	w/o shield	165° 180°	80° 85°	100° 200°	 130°
35W	w/o shield with shield	270° 290°	100° 110°	145° 160°	 180°

Max. permitted temperature

Max. permitted temperature	350°	20W,35W:250°	-	240°

***) Temperatures for free burning position are not obliging**

Measurement conditions (as applied for above given temperature measurements)
Burning position: measurements were done in the hottest position for pinch and pins.
The burning position has no significant effect on the temperature of the reflector and the adhesive joint.
Surrounding temperature: 25°C (acc. DIN 5032)
Measurement voltage:: 12,0 V
Lamp holder: Bender & Wirth 989

Minimum safety distance

0,5 m (value not obliging)
The minimum safety distance to be obeyed has to be verified with the fixture the lamp is applied for

Burning position

any

Environmental friendliness

Can be disposed of as household waste.
During operation no poisonous or harmful gases are released.
During the first hours of operation the evaporation of remaining humidity from the cement and adhesive is possible.

Cautionary notes

Operate only in suitable equipment/fixtures, which is explicitly specified for this lamp type
Obey minimum safety distance
Applying lamps with cover lens instead of open types the temperatures of the fixture and of the lamp pinch temperature rise significantly .
Check, if operation of lamps with cover lens is possible (see manual of the fixture)