iC-SD
Infrared LED

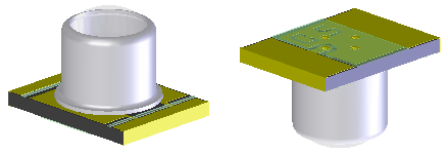
FEATURES

- Emission peak at 740 nm matched to silicon detectors and opto-ICs
- Optimized irradiance pattern
- High temperature range -40 to 125 °C
- Power output 0.6 mW at 20 mA
- High switching speed
- Package suitable for SMT mounting

APPLICATIONS

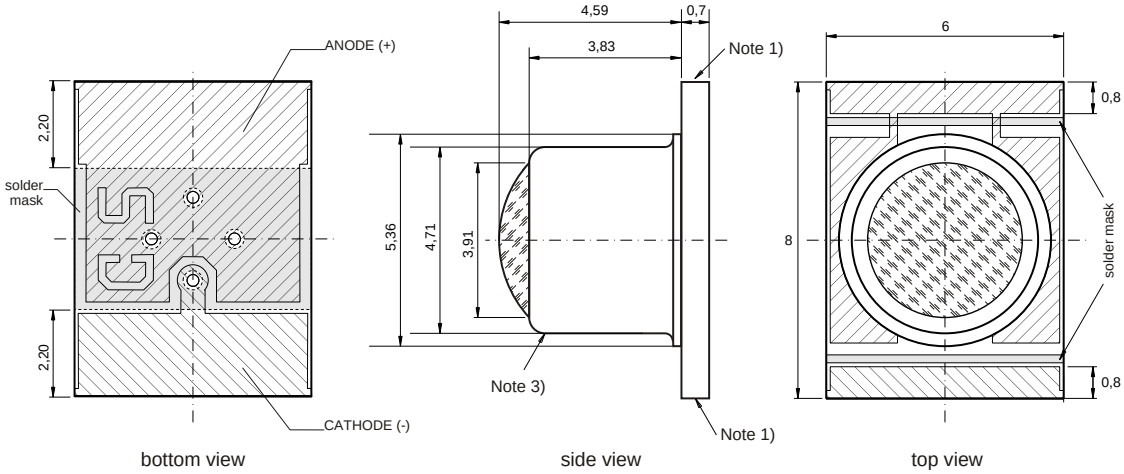
- Illumination for high resolution optical encoder
- Modulated light barriers

PACKAGES



SD1C

DIMENSIONAL OUTLINE



All dimensions in mm

Notes:
1) Edges metallized
2) Metallized areas indicated with ▨ or ▨
3) Lens cap TO-18
(see SCHOTT SL 10.032.901 specification for details)

EUROPEAN PROJECTION

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ABSOLUTE MAXIMUM RATINGS

Beyond these values damage may occur (Ta = 25°C, unless otherwise noted)

Item No.	Symbol	Parameter	Conditions	Fig.	Min.	Max.	Unit
G001	IF	Forward current (DC)				50	mA
G002	IFM	Peak forward current	tp $\leq$ 50µs, tp/T=0,5			100	mA
G003	IFSM	Surge forward current	tp $\leq$ 10µs			1000	mA
G004	VR	Reverse voltage				5	V
G005	P	Power dissipation	Case temperature 25°C			150	mW

THERMAL DATA

Item No.	Symbol	Parameter	Conditions	Fig.	Min.	Typ.	Max.	Unit
T01	Tamb	Operating temperature range			-40		125	°C
T02	Tstg	Storage temperature range			-40		125	°C
T03	Ts	Soldering temperature	soldering, 10 sec				230	°C
T04	Rthja	Thermal resistance junction to ambient				TBD		K/W

ELECTRICAL CHARACTERISTICS

Tamb = 25°C, unless otherwise noted

Item No.	Symbol	Parameter	Conditions	Tj °C	Fig.	Min.	Typ.	Max.	Unit
Electrical and Optical Characteristics									
001	VF	Forward voltage	IF = 10 mA				1.6	1.8	V
002	VF	Forward voltage	IF = 20 mA				1.7	1.9	V
003	VR	Reverse voltage	IR = 100 µA			5			V
004	Φ_e	Radiant power	IF = 10 mA			0.2	0.3		mW
005	Φ_e	Radiant power	IF = 20 mA			0.4	0.6		mW
006	TK(Φ_e)	Temperature coefficient of radiant power	IF = 5 mA, Tamb = 25°C...125°C				-0.4		%/K
007	λ_p	Peak wavelength	IF = 10 mA			730	740	750	nm
008	$\Delta\lambda$	Spectral half width	IF = 10 mA				26		nm
009	2ϕ	Viewing angle	IF = 10 mA				8		deg.
010	tr, tf	Switching time	IF = 10 mA				50		ns

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ORDERING INFORMATION

Type	Package	Order Designation
iC-SD	SD1C	iC-SD BLCC SD1C

For information about prices, terms of delivery, other packaging options etc. please contact:

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