

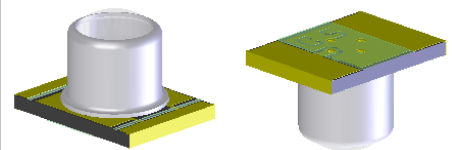
## FEATURES

- ◆ 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

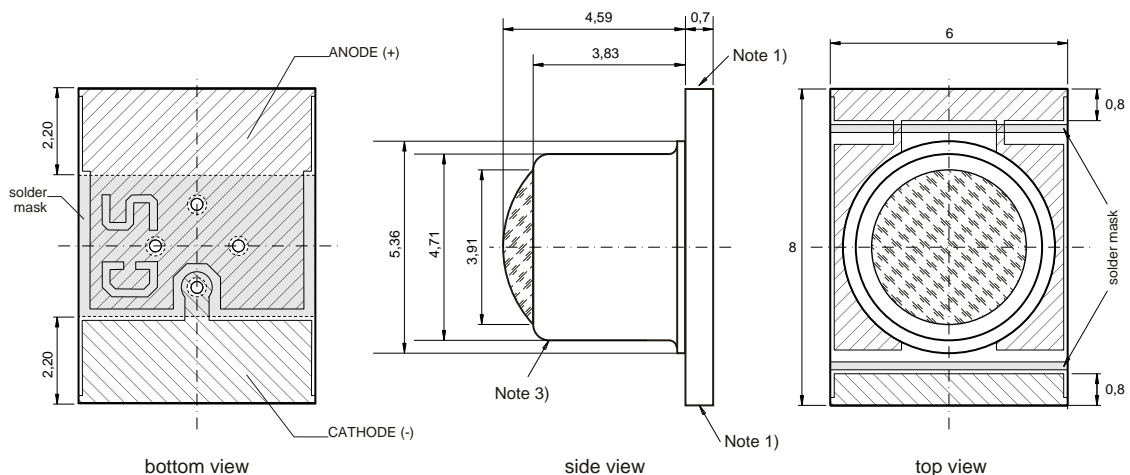
- ◆ Illumination for high resolution optical encoder
- ◆ Modulated light barriers

## 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)



**ABSOLUTE MAXIMUM RATINGS**

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

Item No.	Symbol	Parameter	Conditions	Fig.			Unit
					Min.	Max.	
G001	IF	Forward current (DC)				50	mA
G002	IFM	Peak forward current	tp ≤ 50µs, tp/T=0,5			100	mA
G003	IFSM	Surge forward current	tp ≤ 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.				Unit
					Min.	Typ.	Max.	
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.				Unit	
						Min.	Typ.	Max.		
<b>Electrical and Optical Characteristics</b>										
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	Φe	Radiant power	IF = 10 mA			0.2	0.3			mW
005	Φe	Radiant power	IF = 20 mA			0.4	0.6			mW
006	TK(Φe)	Temperature coefficient of radiant power	IF = 5 mA, Tamb = 25°C...125°C				-0.4			%/K
007	λp	Peak wavelength	IF = 10 mA			730	740	750		nm
008	Δλ	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

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