CERLED®

SMD Chip Detector

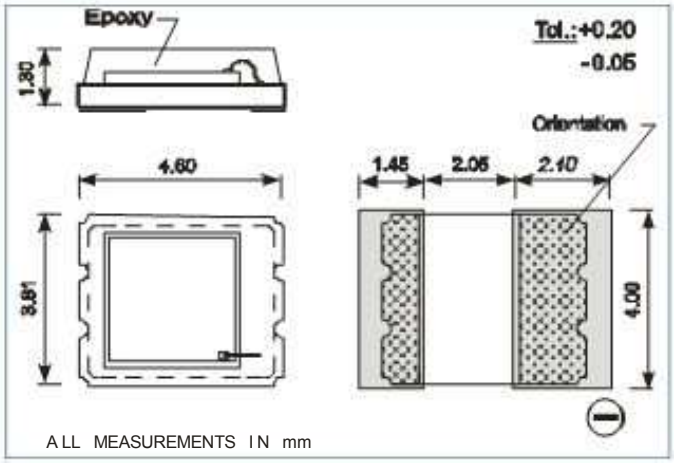
SMD - Receiver
PFD 10 Photo Pin Diode -H*

*RohS-conform

DATASHEET

Description

Real surface mount component with a FR4 chip base.
The silicon Photo PIN Diode provides the positive side on the front and the negative side on the FR4 contact base.
With its low height of 1.3 mm, the component is suitable for many applications with limited space. With its large solder pads, mounting on flexible foil is possible.
Delivery in blister tape on request.



Features and Benefits

- High reliability
- Fast response time
- Small junction capacitance
- Low noise
- High photo sensitivity
- Large radiant sensitivity area of 6.40 mm²
- Chip Size : 2.92 mm x 2.92 mm
- Active Area: 2.59 mm x 2.59 mm

Maximum Ratings at 25° C

Reverse Voltage	V_R	32 V
Power dissipation	P_V	200 mW
Junction temperature	T_j	80° C
Storage temperature	T_{stg}	-25° C to 120° C
Operating temperature	T_{op}	-25° C to 80° C
Soldering temperature	T_{sold} (10 s)	240° C

Optical and Electronic Characteristics at 25° C

Photodiode operation

		typ	max	unit
Reverse dark current (V_R = 10 V, E_E = 0 mW/cm²)	I_R	5	30	nA
Light reverse current (V_R = 5 V, E_E = 5 mW/cm²)	I_{SC}	66		µA
Sensitivity (V_R = 10 V, λ = 880 nm)	S	0.6		A/W
Junction capacitance (V_R = 3 V, f = 1 MHz, E_E = 0 mW/cm²)	C_j	25		pF
Open circuit voltage (E_E = 5 mW/cm²)	V_O	350		mV

Switching characteristics (VR = 10 V, RL = 1 K Ohm)

Turn on time (880nm)	t_{on}	200	ns
Turn off time (880nm)	t_{off}	200	ns
Peak sensitivity wavelength	λmax	880	nm
Range of spectral bandwidth	λ	530 … 1000	nm
Range of spectral bandwidth with daylight filter	λ	750 … 1000	nm

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