

LED 660nm 10MBit/s

1 General

This active component is especially suited for applications with standard 1mm plastic optical fiber. Pre-mounted with a fast 660nm LED capable of high optical output power, the component is a good solution in optical data transmission systems with plastic optical fibers.

2 Application

Due to the high data rate of 10MBit/s (with suitable driver circuit), the good optical characteristics and the simple connection technology of the fiber optic cable, the RPOptoClamp may be used in many applications:

- Optical networks
- Industrial electronics
- Power electronics
- Automotive
- Consumer electronics
- Photo electric barriers

3 Ordering information

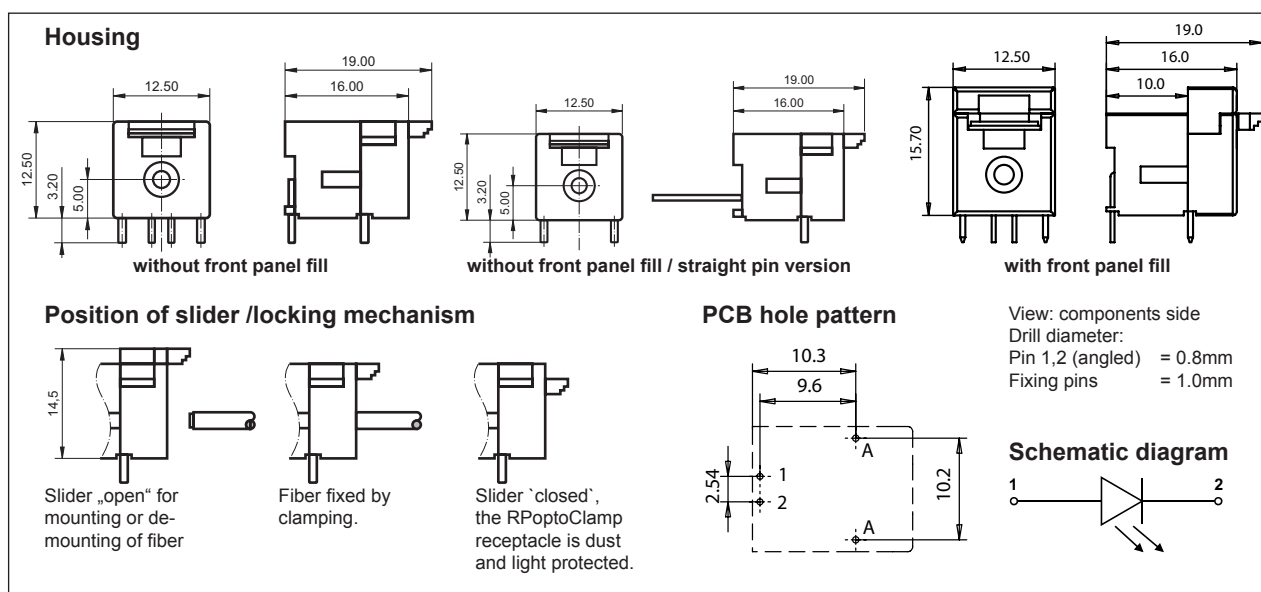
Specification

660 nm LED

Part number

905SE660KRM01

4 Technical drawing



Pic. 2 Drawings



Pic. 1 Pre-mounted RPOptoClamp with Transmitter 660nm

5 Features

- 660nm LED
- 200 μ W output power @ 10mA
- 10MBit/s (with suitable driver circuit)
- Plugless optical fiber cable assembly
- Suitable for MOST POF 1/1.5/2.3mm
- Fast locking mechanism (manual control)
- Plastic housing
- Suitable for automatic assembly
- Reflow-/ wave soldering

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6 Maximum ratings

Stresses beyond those listed under «Maximum Ratings» may cause permanent damage to the device. Maximum ratings represent stress limits of the device. Operation of the electronic component at these values is not recommended over an extended period as this may adversely affect the reliability of the component.

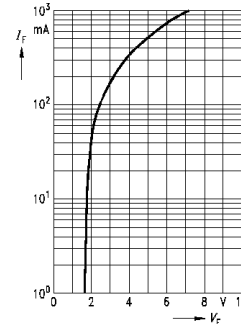
Parameter	Wert	Einheit
Operating temperature	-40 to +80	°C
Storage temperature	-55 to +100	°C
Junction temperature	100	°C
Soldering temperature, 2mm distance to housing t ≤ 5s	260	°C
Reverse voltage	3	V
Forward current	50	mA
Surge current t ≤ 10µs, D=0	1	A
Power dissipation	120	mW
Thermal resistane	450	K/W

7 Technical data

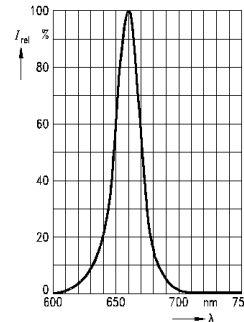
Parameter	Value	Unit
Wavelength λ	660	nm
Spectral bandwidth Δλ	25	nm
Rise / fall time (I _F =50mA)		
t _R	100	ns
t _F	100	ns
Capacitance C _J (V _R =0V)	30	pF
Forward current V _F (I _F =20mA)	2.1 (<2.8)	V
Fiber coupled power P _{OUT} into 1mm POF (I _F =10mA)	200 (>100)	µW
Temperature coefficient P _{OUT}	-0.4	%/K
Temperature coefficient V _F	-3	mV/K
Temperature coefficient λ	0.16	nm/K

8 Characteristics

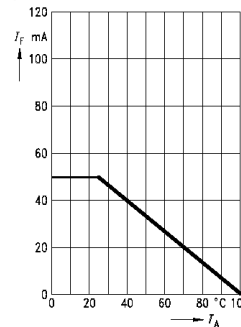
Forward current I_F = f(V_F), single pulse, duration = 20 µs



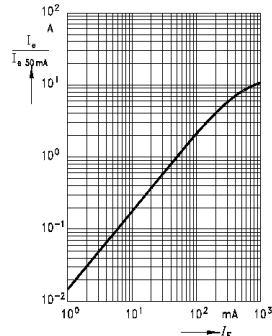
Relative spectral emission I_{rel} = f(λ)



Maximum permissible forward current I_F = f(T_A), R_{th,JA} = 450 K/W



Relative output power I_e/I_{e(50 mA)} = f(I_F), single pulse, duration = 20 µs



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