

LED 660 nm 10 MHz

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.

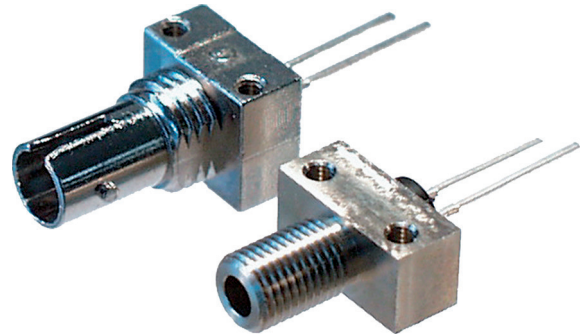
2 Application

Due to the high modulation frequency of 10MHz, the good optical and mechanical characteristics the device may be used in many applications:

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

3 Ordering information

Specification	Part number
F-SMA	905 SE 660 SM 102
F-SMA (including accessories)	905 SE 660 SM 1Z2
F-ST	905 SE 660 ST 102
F-ST (including accessories)	905 SE 660 ST 1Z2



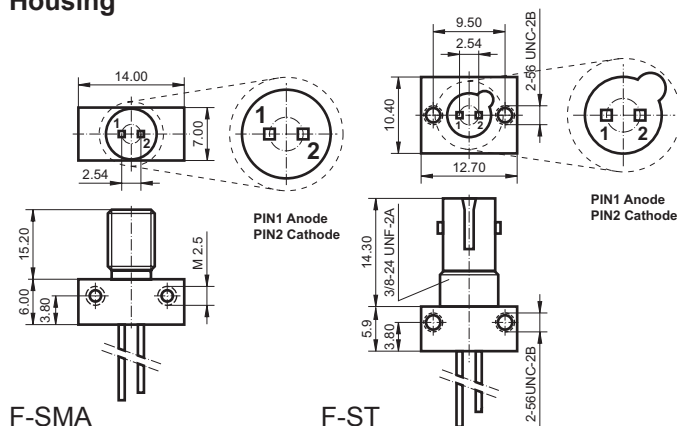
Pic. 1 F-ST, F-SMA metal receptacle

5 Features

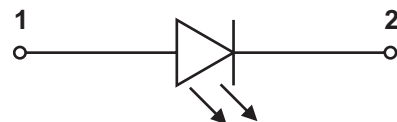
- 660nm LED
- 200µW output power @ 10mA
- 10MHz
- F-SMA port
- F-ST port
- Suitable for POF and PCF fiber
- metal housing
- Suitable for automatic assembly
- Reflow-/ wave soldering

4 Technical drawing

Housing



Schematic diagramm



Accessories: Nut, washer,screws

Pic. 2 Drawing F-ST, F-SMA metal receptacle

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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.

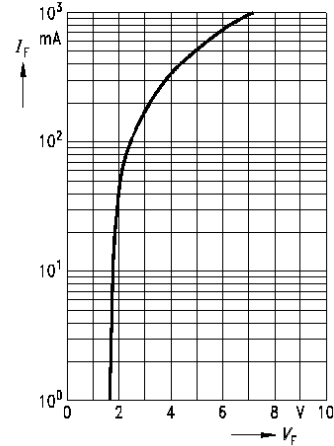
Parameter	Value	Unit
Operating temperature	-40 to +85	°C
Storage temperature	-40 to +100	°C
Junction temperature	100	°C
Soldering temperature, 2mm distance to housing t ≤ 5s	260	°C
Reverse voltage	3	V
Forward current	50	mA
Surge current t ≤ 10µs, D=0	1	A
Power dissipation	120	mW
Thermal resistane	450	K/W

7 Technical data

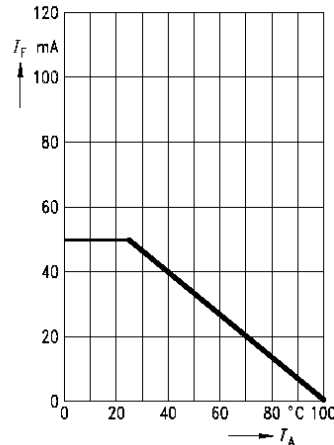
Parameter	Value	Unit
Wavelength λ	660	nm
Spectral bandwidth Δλ	25	nm
Rise / fall time (I _F =50mA)		
t _R	100	ns
t _F	100	ns
Capacitance C _J (V _R =0V)	30	pF
Forward current V _F (I _F =20mA)	2.1 (<2.8)	V
Fiber coupled power P _{OUT} into 1mm POF (I _F =10mA)	200 (>100)	µW
Temperature coefficient P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

8 Characteristics

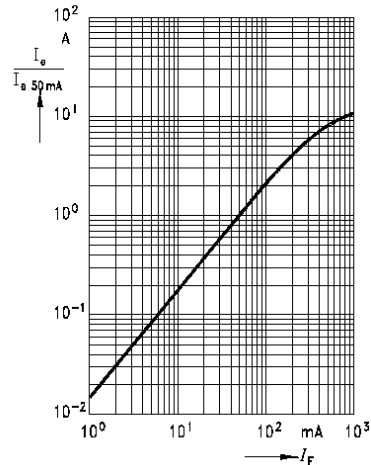
Forward current $I_F = f(V_F)$, single pulse, duration = 20 µs



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



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



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