

LED 660nm 10MBit/s

1 General

This device is especially suitable for applications with standard 1mm plastic optical fiber. Pre-mounted with a fast 660nm LED which has a high output signal, the transmitter is a good alternative solution in data transmission systems with plastic optical fibers.

2 Application

Due to the high data rate of 10MBit/s, the good optical characteristics and the simple connection technology of the fiber optic cable, the clamp system may be used in many applications:

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

3 Ordering information

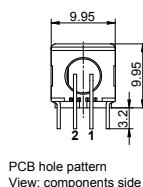
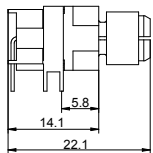
Transmitter 10MBit/s, 660nm

Specification	Part number
horizontal assembly version	905SE660KM003
vertical assembly version	905SE660KM004

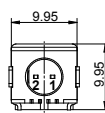
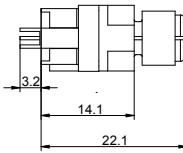
4 Drawing

Housing

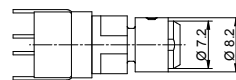
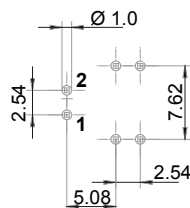
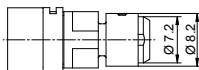
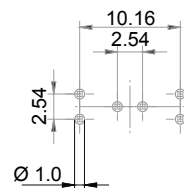
Horizontal assembly



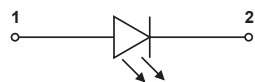
Vertical assembly



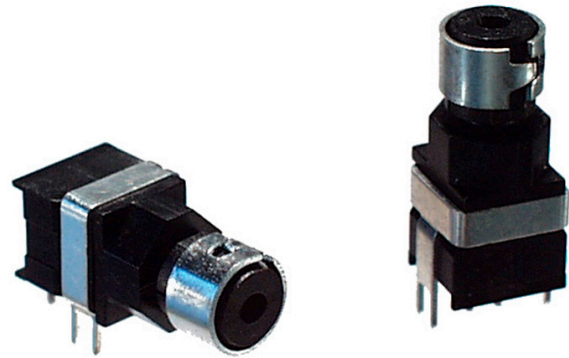
PCB hole pattern View: components side



Schematic diagram



Pin-No.	Function
1	Anode
2	Cathode



Pic. 1 Clamp housing with Transmitter 660nm

5 Features

- 660nm LED
- 200µW output power at 10mA
- 10MBit/s (with suitable driver circuit)
- Plugless optical fiber cable assembly
- Suitable for all plastic optical fiber cables with an outside diameter of 2.2 mm and a fiber diameter of 1 mm
- Fast locking mechanism (clamp ring)
- Plastic housing
- Suitable for automatic assembly
- Reflow-/ wave soldering

Pic. 2 Drawings

LED 660nm 10MBit/s

6 Maximum ratings

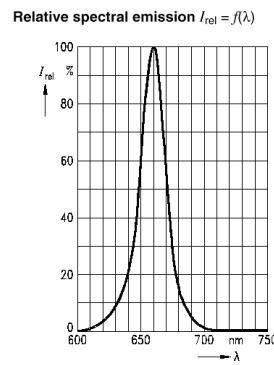
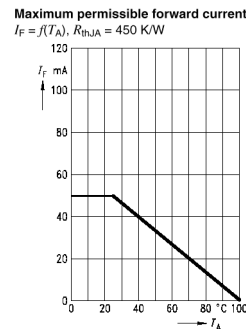
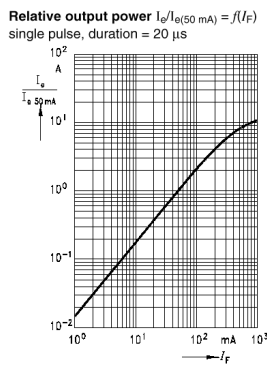
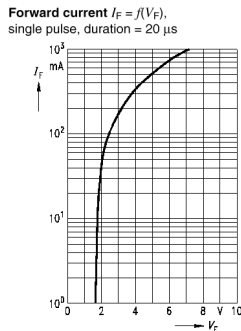
Stresses beyond those listed under `Maximum Ratings` may cause permanent damage to the device. Maximum ratings represent stress limits of the device. Operation of the electronic component at these values is not recommended over an extended period as this may adversely affect the reliability of the component.

Parameter	Wert	Einheit
Operating temperature	-40 to +80	°C
Storage temperature	-55 to +100	°C
Junction temperature	100	°C
Soldering temperature 2 mm 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 resistance	450	K/W

7 Technical data

Parameter	Wert	Einheit
Wavelength λ	660	nm
Spectral bandwidth $\Delta\lambda$	25	nm
Rise / fall time ($I_F=50\text{mA}$)		
t_R	100	ns
t_F	100	ns
Capacitance ($V_R=0\text{V}$)	30	pF
Forward voltage V_F ($I_F=50\text{mA}$)	2.1 (<2.8)	V
Fiber coupled power P_{OUT} into 1 mm POF ($I_F=10\text{mA}$)	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



The information released by Ratioplast-Optoelectronics GmbH in this data sheet is believed to be accurate and reliable. However, no responsibility is assumed by Ratioplast-Optoelectronics GmbH for its use. Ratioplast-Optoelectronics GmbH reserves the right to change circuitry and specifications at any time without notification to the customer.