

SFH750 Plastic Fiber Optic Transmitter Diode SFH750V Plastic Connector Housing

Features

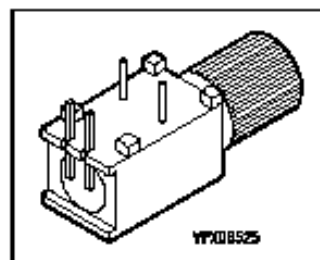
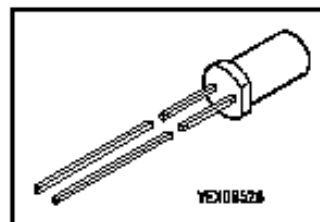
- 2.2 mm Aperture holds Standard 1000 Micron Plastic Fiber
- No Fiber Stripping Required
- Good Linearity (Forward current >2 mA)
- Molded Microlens for Efficient Coupling

Plastic Connector Housing

- Mounting Screw Attached to the Connector
- Interference Free Transmission from light-Tight Housing
- Transmitter and Receiver can be flexibly positioned
- No Cross Talk
- Auto insertable and Wave solderable
- Supplied in Tubes

Applications

- Household Electronics
- Power Electronics
- Optical Networks
- Medical Instruments
- Automotive Electronics
- Light Barriers



Type	Ordering Code
SFH750	Q62702-P1031
SFH750V	Q62702-P0266

Absolute Maximum Ratings

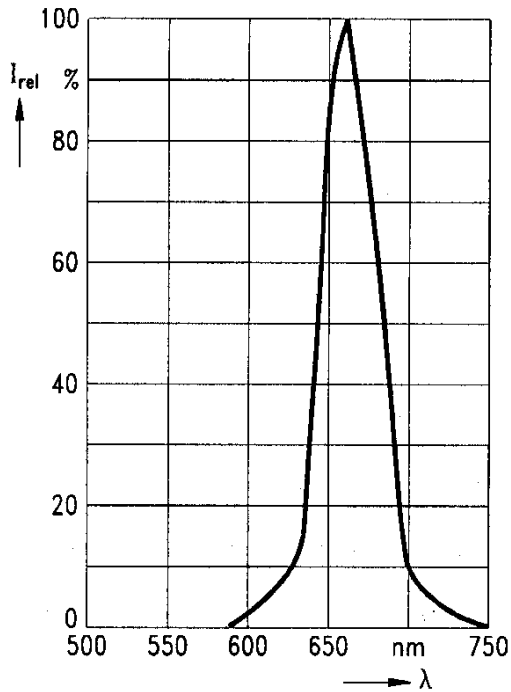
Parameter	Symbol	Value	Unit
Operating Temperature Range	T _{OP}	-40 to +85	°C
Storage Temperature Range	T _{STG}	-55 to +100	°C
Junction Temperature	T _J	100	°C
Soldering Temperature (2 mm from case bottom t≤5 s)	T _S	260	°C
Reverse Voltage	V _R	5	V
Forward Current	I _F	45	mA
Surge Current t≤10 μs, D=0	I _{FSM}	1	A
Power Dissipation	P _{TOT}	150	mW
Thermal Resistance, Junction/Air	R _{thJA}	500	K/W

Characteristics ($T_A = 25^\circ\text{C}$)

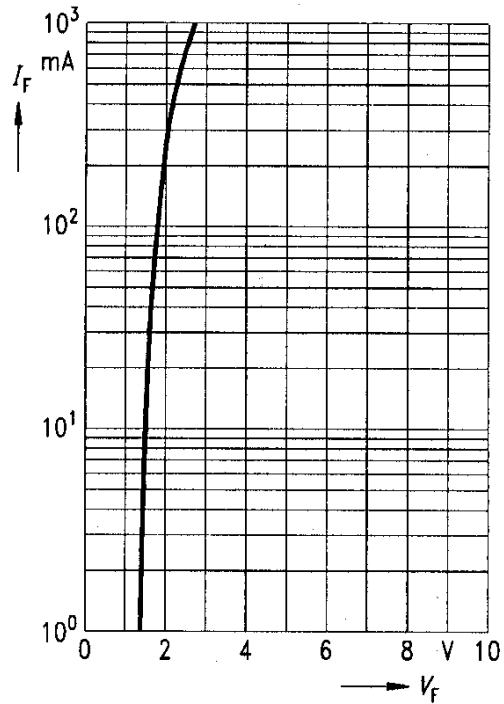
Parameter	Symbol	Value	Unit
Peak Wavelength	λ_{Peak}	660	nm
Spectral Bandwidth	$\Delta\lambda$	35	nm
Switching Times ($R_G=50\ \Omega$, $I_{F(\text{LOW})}=0.1\ \text{mA}$, $I_{F(\text{HIGH})}=50\ \text{mA}$) 10% to 90% 90% to 10%	t_R t_F	0.12 0.12	μs μs
Capacitance ($f=1\ \text{MHz}$, $V_R=0\text{V}$)	C_O	25	pF
Forward Voltage ($I_F=10\ \text{mA}$)	V_F	1.6 (≤ 2.0)	V
Output Power coupled into Plastic fiber ($I_F=10\ \text{mA}$) see Note 1	Φ_{IN}	20 (≥ 6.3)	μW
Temperature Coefficient Φ_{IN}	TC_Φ	-0.8	%/K
Temperature Coefficient V_F	TC_V	-1.5	mV/K
Temperature Coefficient λ_{Peak}	TC_λ	0.17	nm/K

Note 1: The output power coupled into plastic fiber is measured with a large area detector after a short fiber (about 30 cm). This value must not be used for calculating the power budget for a fiber optic system with a long fiber because the numerical aperture of plastic fibers is decreasing on the first meters. Therefore the fiber seems to have compared with the specified value a higher attenuation on the first meters.

Relative spectral emission $I_{rel} = f(\lambda)$

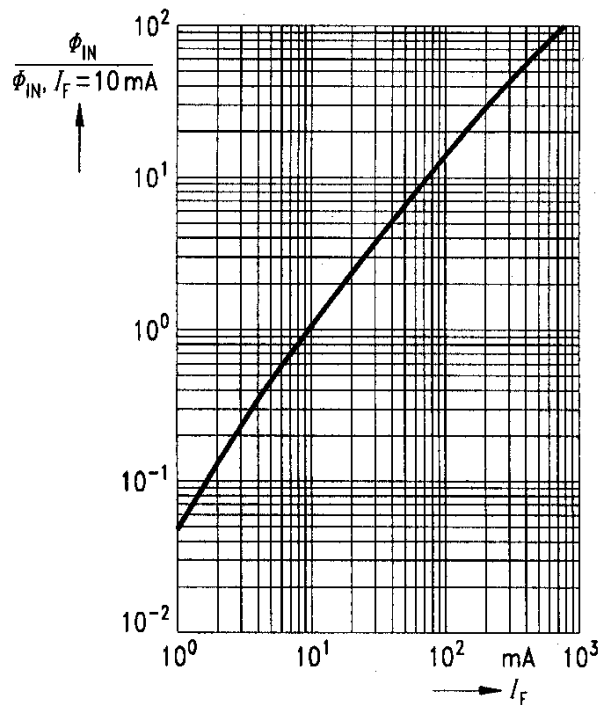


**Forward current $I_F = f(V_F)$,
single pulse, duration = 20 μ s**

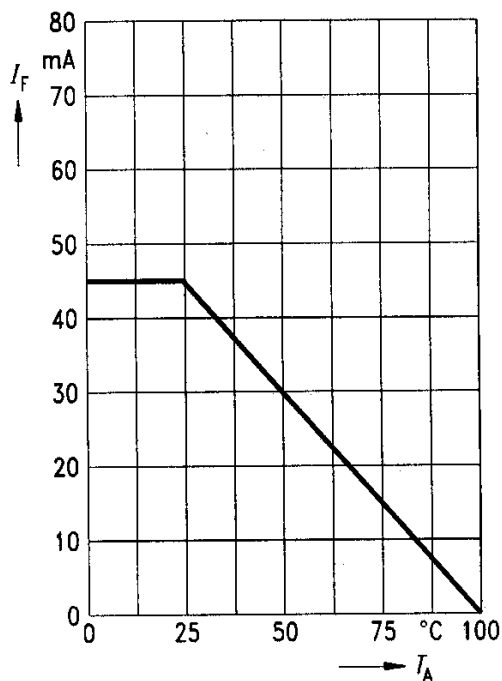


Relative optical output power

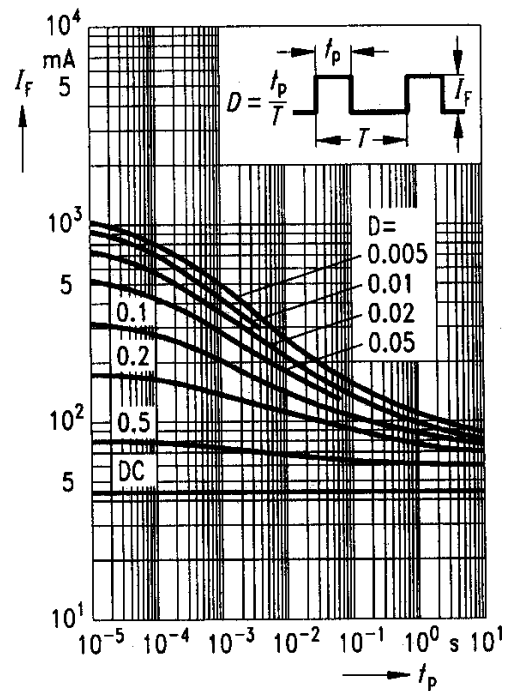
$\Phi_{IN}/\Phi_{IN(10\text{ mA})} = f(I_F)$



Maximum permissible forward current
 $I_F = f(T_A)$

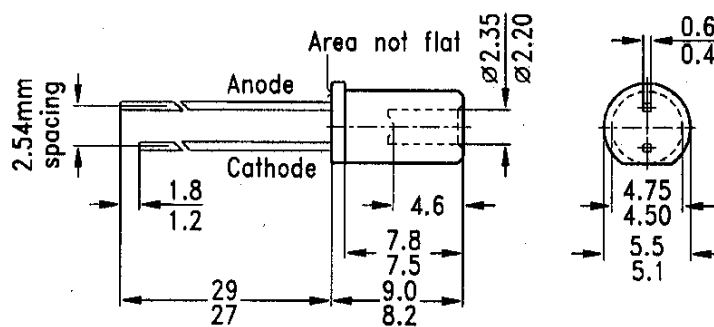


**Permissible pulse load $I_F = f(t)$,
duty cycle $D =$ parameter, $T_A = 25$ °C**

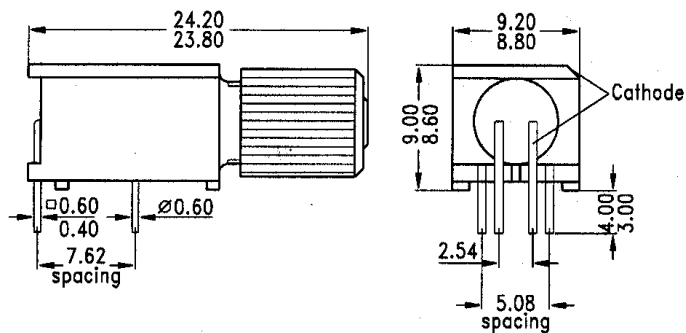


Package Outlines (dimensions in mm, unless otherwise specified)

SFH750



SFH750V



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