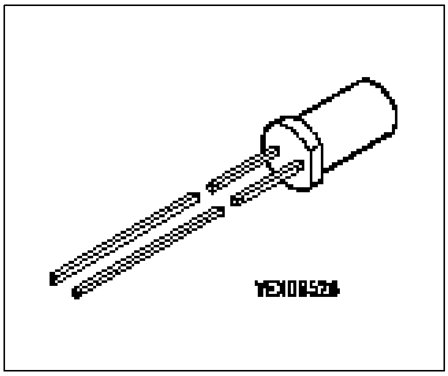
Plastic Fiber Optic Transmitter Diode
Plastic Connector Housing

SFH756
SFH756V

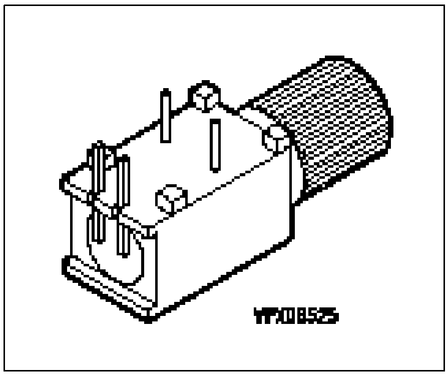
Features

- 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
- Light Barriers

Type	Ordering Code
SFH756	Q62702-P1716
SFH756V	Q62702-P1715

Technical Data

Absolute Maximum Ratings

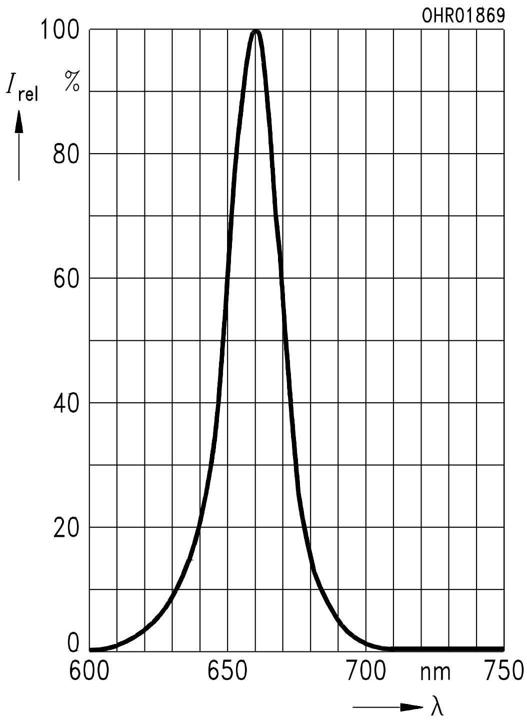
Parameter	Symbol	Limit Values		Unit
		min.	max.	
Operating Temperature Range	T_{OP}	–40	+85	°C
Storage Temperature Range	T_{STG}	–40	+100	°C
Junction Temperature	T_J		100	°C
Soldering Temperature (2 mm from case bottom, $t \leq 5$ s)	T_S		260	°C
Reverse Voltage	V_R		3	V
Forward Current	I_F		50	mA
Surge Current ($t \leq 10$ µs, $D = 0$)	I_{FSM}		1	A
Power Dissipation	P_{TOT}		120	mW
Thermal Resistance, Junction/Air	R_{thJA}		450	K/W

Characteristics (T_A = 25°C)

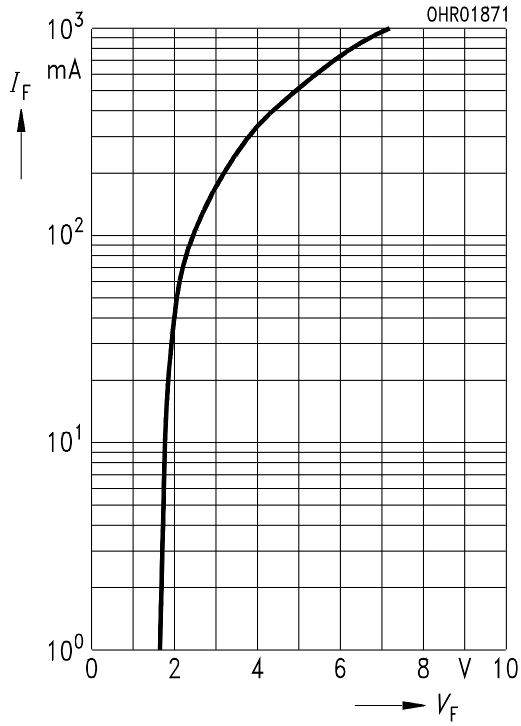
Parameter	Symbol	Value	Unit
Peak Wavelength	λ_{Peak}	660	nm
Spectral Bandwidth	$\Delta\lambda$	25	nm
Switching Times (R_G = 50 Ω), $I_{F(LOW)}$ = 0.1 mA, $I_{F(HIGH)}$ = 50 mA) 10% to 90% 90% to 10%	t_R t_F	0.1 0.1	µs
Capacitance (f = 1 MHz, V_R = 0 V)	C_O	30	pF
Forward Voltage (I_F = 50 mA)	V_F	2.1 (≤ 2.8)	V
Output Power Coupled Into Plastic Fiber (I_F = 10 mA)[1]	Φ_{IN}	200 (≥ 100)	µW
Temperature Coefficient Φ_{IN}	TC_{Φ}	–0.4	%/K
Temperature Coefficient V_F	TC_V	–3	mV/K
Temperature Coefficient λ_{Peak}	TC_{λ}	0.16	nm/K

[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 used for calculating the power budget for a fiber optic system with a long fiber because the numerical aperture of plastics 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.

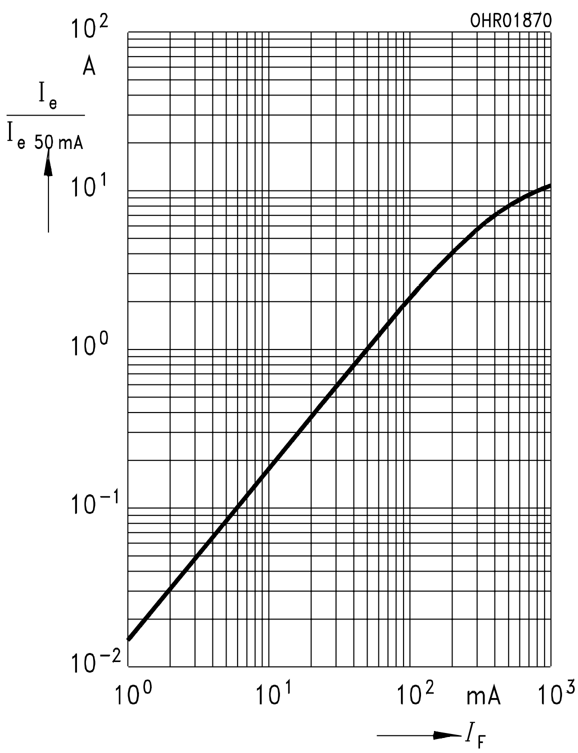
Relative Spectral Emission $I_{rel} = f(\lambda)$



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

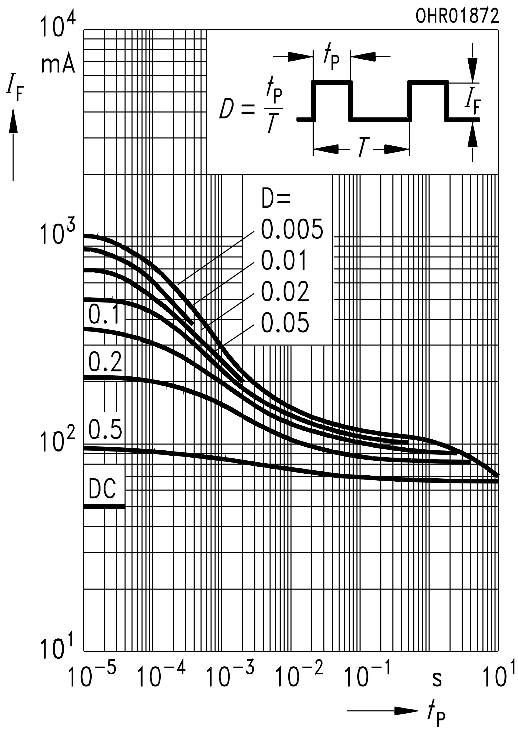


Relative Output Power $I_e/I_{e(50\ mA)} = f(I_F)$
single pulse, duration = 20 µs



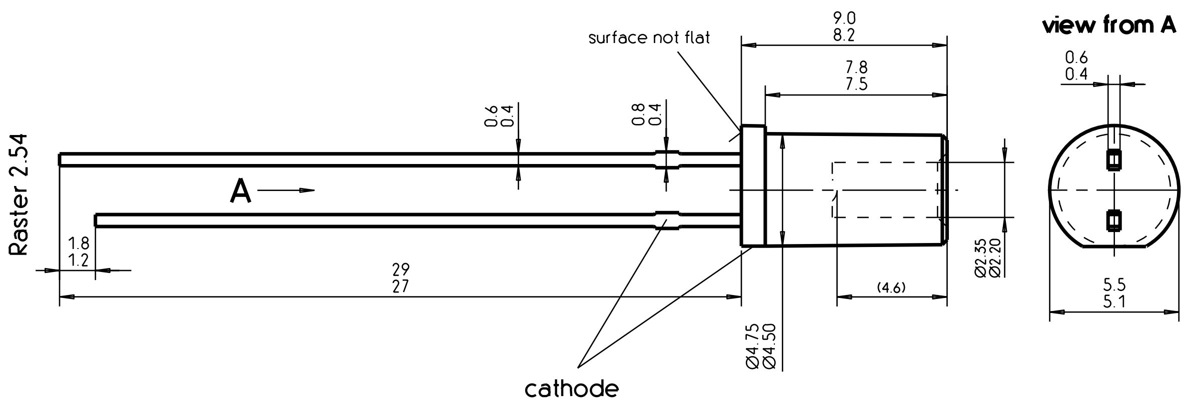
Maximum Permissible Forward Current
$I_F = f(T_A)$, R_{thJA} = 450 K/W

Permissible Pulse Handling Capability
$I_F = f(t_P)$, duty cycle D = parameter,
T_A = 25°C



Package Outlines

SFH756

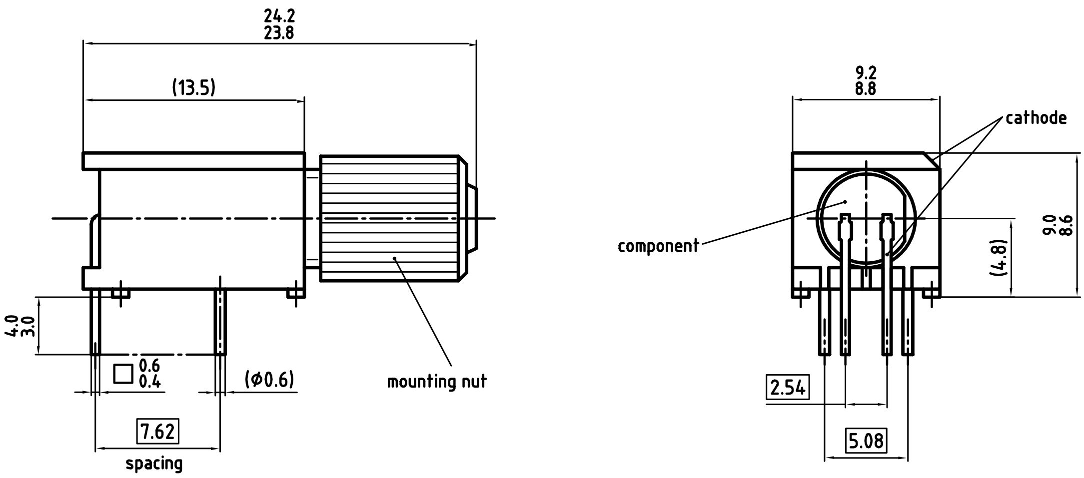


Dimensions in mm

File: 4209

Figure 1

SFH756V



Dimensions in mm

File: 4210

Figure 2

SFH756
SFH756V

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