

LED 850nm

1 General

This device is designed for applications with multimode glass fiber 50/125µm and PCF up to 200/230µm. The high performance of the LED makes this transmitter a good choice in data transmission systems with glass fibers.

2 Application

Due to the good optical and mechanical features this transmitter may be used in many applications:

- Optical networks
- Industrial electronic
- Power electronic

3 Ordering Information

Model	Part number
850nm LED	905SE850SM001
850nm LED with fixing pins	905SE850SM002

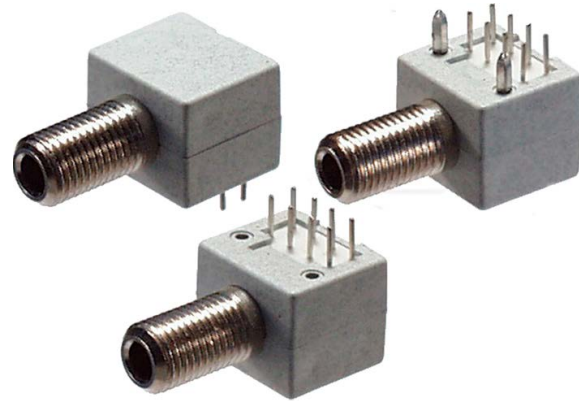


Fig. 1 F-SMA with DIP-Housing

4 Features

- 850nm LED
- 25µW output power in 50/125µm fiber at 100mA
- F-SMA port (metal)
- Qualified for glass and PCF fiber
- Plastic case
- Optional with fixing pins
- Pick and place support
- Wave soldering compatible

5 Technical Drawing

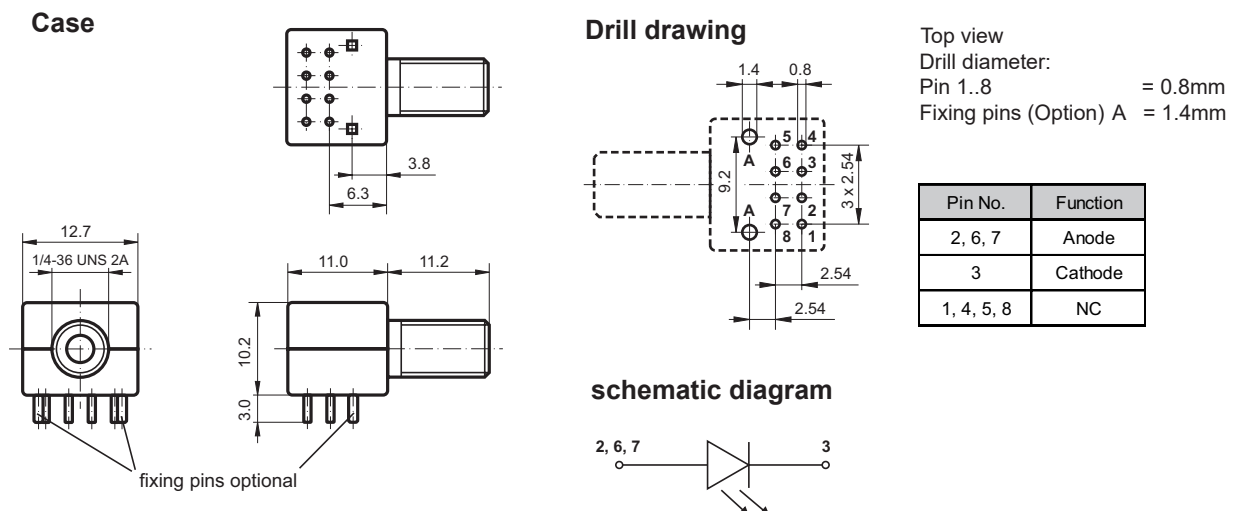


Fig. 2 Drawing

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6 Maximum Ratings ($T_A = 25^\circ\text{C}$) _____

Stresses beyond those listed under 'Maximum Ratings' may cause permanent damage to the device. Listed values are stress limits only and functional operation of the device at these conditions is not recommended. Exposure to maximum rating conditions for extended periods may affect the device reliability.

Parameter	Value	Unit
Operating temperature range	-40 ... +100	$^\circ\text{C}$
Storage temperature range	-55 ... +115	$^\circ\text{C}$
Lead soldering temperature 2mm from case, $t \leq 5\text{s}$	260	$^\circ\text{C}$
Reverse voltage	1	V
Forward current	100	mA

7 Technical Data ($T_A = 25^\circ\text{C}$) _____

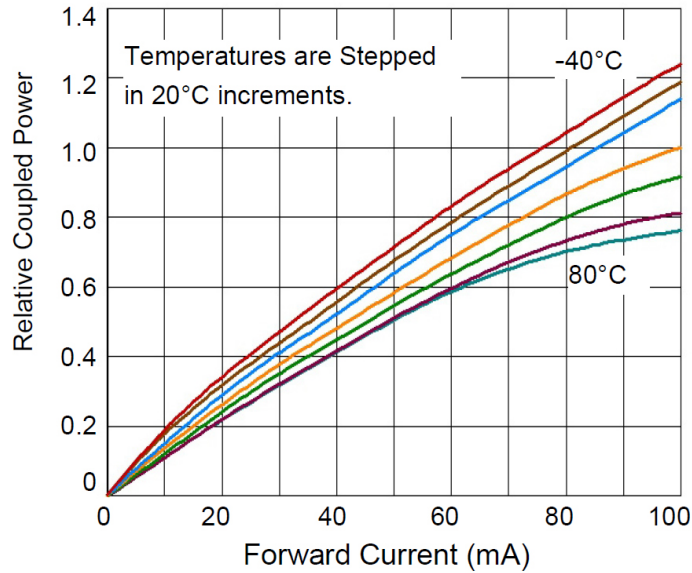
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward voltage	V_F	$I_F = 100\text{mA}$		1.8	2.2	V
Reverse voltage	V_R	$I_R = 100\mu\text{A}$	1.8			
Total coupled power	P_{OPT}	Fiber 50/125 μm , N. A. 0.20, $I_F = 100\text{mA}$	25	29		μW
		Fiber 62.5/125 μm , N. A. 0.28, $I_F = 100\text{mA}$	25	89		
		Fiber 100/140 μm , N. A. 0.29, $I_F = 100\text{mA}$	25	200		
		Fiber 200/230 μm , N. A. 0.41, $I_F = 100\text{mA}$	25	750		
Wavelength	λ_P	$I_F = 50\text{mA}$	830	850	870	nm
Optical bandwidth	Δ_λ	$I_F = 50\text{mA}$		50	60	
Switching times	t_r	$I_F = 100\text{mA}$, 10%...90%		6.0	10.0	ns
	t_f			6.0	10.0	



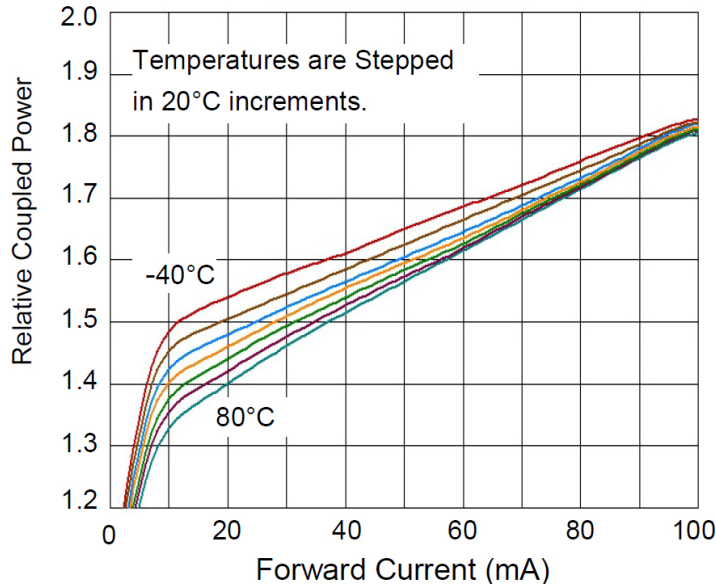
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8 Characteristics _____

Relative Coupled Power vs. Forward Current



Typical Forward Voltage vs. Forward Current



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