

System Adapter for Light Source MS100HU 850nm

1 General

The adapter is especially suitable for inspections and tests at assembled glass optical fiber and PCF cables with core diameter $>50\mu\text{m}$ in combination with the signal generator **MS100HU** (Item no. **909MS00000111**). The adapter is pre-mounted with a fast 850nm LED capable of high optical output power. Designed to operate with the signal generator MS100HU, the adapter fits on every function or pulse generator with minimum 50 Ohm output impedance.



Pic. 1 Adapter F-ST, F-SMA and HFBR

2 Application

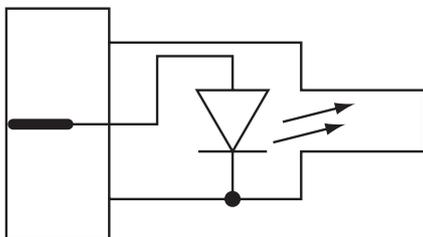
Due to the good optical and mechanical features the adapter may be used in many applications:

- Quality inspections
- Receiver tests
- Attenuations measurements
- Installation inspections at optical networks

4 Features

- 850nm LED
- $29\mu\text{W}$ @ 100mA fiber coupled power 50/125 μm GI-Fiber
- suitable for all glass optical fibers and PCF with core diameter $>50\mu\text{m}$
- Compact design with BNC male socket
- Optical ports F-SMA, F-ST or HFBR-Versatile Link (more options on request)

3 Block diagramm



Pic. 2 Block diagramm

5 Ordering information

Design	Part number
850nm LED F-SMA	909MS850SM001
850nm LED F-ST	909MS850ST001
850nm LED HFBR	909MS850HF006

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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	



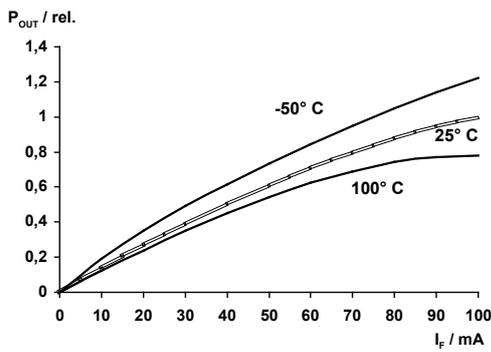
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7 Technical Data (Continue) _____

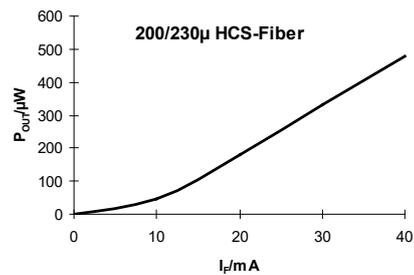
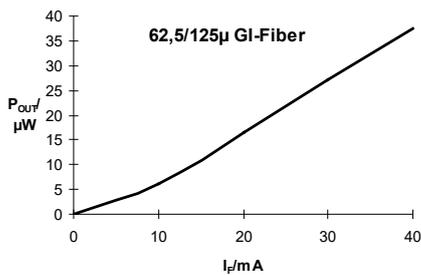
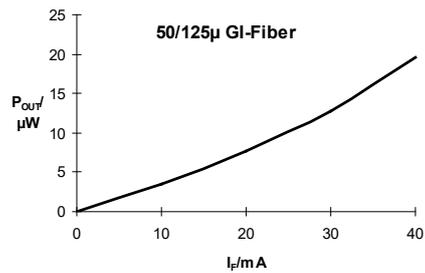
Adapter	Type	Material	Dimensions	Fiber Endface acc.
909MS850SM001	660nm LED F-SMA	Metal	Ø 14.5 x L 37.80 mm	IEC 61754-22
909MS850ST001	660nm LED F-ST	Metal	Ø 14.5 x L 35.40 mm	IEC 61754-2
909MS850HF006	660nm LED HFBR	Metal, Plastic	Ø 14.5 x L 37.20 mm	HFBR-Versatile Link

8 Characteristics _____

Relative radiant intensity vs. DC forward current



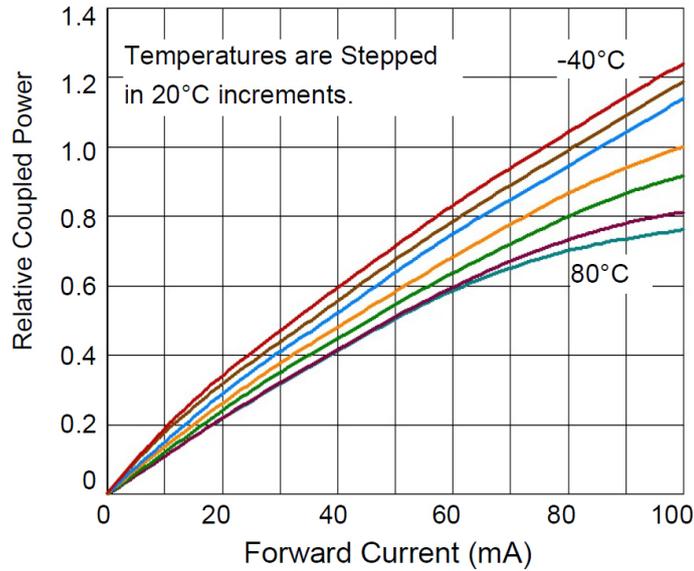
Typ. fiber coupled power



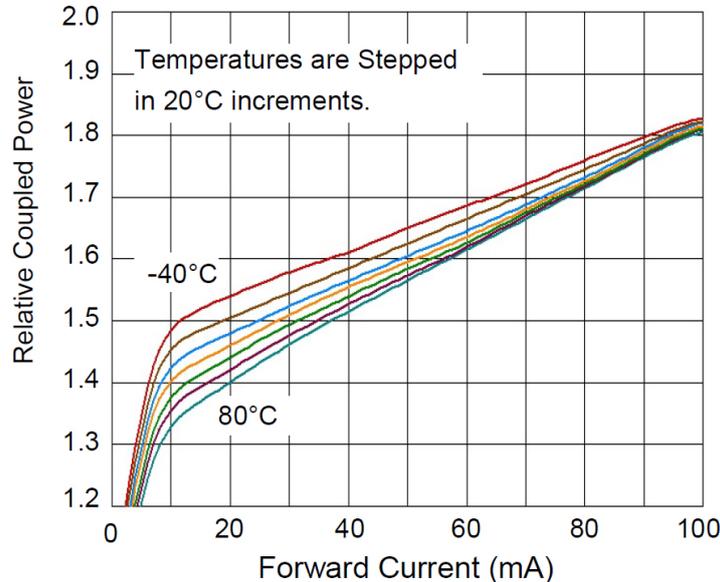
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8 Characteristics (Continue) _____

Relative Coupled Power vs. Forward Current



Typical Forward Voltage vs. Forward Current



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