POWER MONITORS

Fiber Optic Tap Power Monitors

PRODUCT DATASHEET

G&H's polarization-maintaining (PM) and single mode (SM) optical tap power monitors are used for measuring optical fiber power without disrupting the continuity of the signal transmitted inside the fiber.

Ideal for applications such as optical amplifier and DWDM systems.

G&H offers tap monitors with wavelengths in the ranges 830 to 870, 1040 to 1070, 1260 to 1360 and 1460 to 1620 nm. Tap ratio ranges from 1%, 3% to 50%. Both SM and PM fiber options.

Key Features

- Low optical loss
- High reliability
- Low polarization dependent loss (PDL)

Applications

- Telecom
- Data centers
- FTTX
- Optical networks
- Bio/medical Sensors

PRODUCT CODE: TAPM

Optical Specifications

Tap Power Monitors at 830 - 870 nm (Without Connectors)

Parameter	Values		
Operating wavelength	830 - 870 nm		
Tap ratio	1%	3%	5%
Responsivity	≥0.004 mA/mW	≥0.012 mA/mW	≥0.02 mA/mW
Insertion loss (reflection)	≤0.5 dB	≤0.6 dB	≤0.7 dB
PD dark current (T=25°C, -5V bias)	≤2 nA		
Extinction ratio (for PM type)	≥20 dB		
Return loss	≥45 dB		
PDL (for SM type)	≤0.1 dB		
Power handling	≤300 mW		
Operating temperature	-5 – +70°C		
Storage temperature	-40 – +85°C		
Fiber type	Corning HI-780C (for SM type), Fujikura SM 85-PS-U25 (for PM type)		
Dimensions	Ø6.5x26 mm		

1 Soldering temp (over 2 mm from the head and less than 5 seconds ≤260°C).
2 Relative Humidity = 10% to 95% RH, including condensation.
3 Air pressure = 500 to 1060 hPa.

Tap Power Monitors at 1040 - 1070 nm (Without Connectors)

Parameter	Values		
Operating wavelength	1040 - 1070 nm		
Tap ratio	1%	3%	5%
Responsivity	≥0.005 mA/mW	≥0.015 mA/mW	≥0.025 mA/mW
Insertion loss (reflection)	≤0.5 dB	≤0.6 dB	≤0.7 dB
PD dark current (T=25°C, -5V bias)	≤1 nA		
Extinction ratio (for PM type)	≥20 dB		
Return loss	≥50 dB		
PDL (for SM type)	≤0.1 dB		
Power handling	≤300 mW		
Operating temperature	-5 – +70°C		
Storage temperature	-40 – +85°C		
Fiber type	Corning HI-780C (for SM type), Fujikura SM 85-PS-U25 (for PM type)		
Dimensions	Ø3.5x26 mm, Ø5.5x26 mm		

Tap Power Monitors at 1260 - 1360 nm or 1460 - 1620 nm(Without Connectors)

Parameter	Values		
Operating wavelength	11260 - 1360 nm or 1460 - 1620 nm		
Tap ratio	1%	3%	5%
Responsivity	≥0.008 mA/mW	≥0.025 mA/mW	≥0.040 mA/mW
Insertion loss (reflection)	≤0.35 dB	≤0.45 dB	≤0.6 dB
PD dark current (T=25°C, -5V bias)	≤1 nA		
Extinction ratio (for PM type)	≥20 dB		
Return loss	≥50 dB		
PDL (for SM type)	≤0.1 dB		
Insertion loss thermal stability	≤0.005 dB/°C		
Power handling	≤500 mW		
Operating temperature	-5 - +70°C		
Storage temperature	-40 - +85°C		
Dimensions	Ø3.5x26 mm, Ø5.5x26 mm		

1 Soldering temp (over 2 mm from the head and less than 5 seconds ≤260°C).
2 Relative Humidity = 10% to 95% RH, including condensation.
3 Air pressure = 500 to 1060 hPa.

Fiber Table for Tap Power Monitors

Wavelength	WW code	Type	Fiber name	Fiber code	Fiber manufacturer
830 - 870 nm	85	SM	HI-780(C)	06	Corning
		PM	PM780C-A	89	Nufern
1046 - 1070 nm	06	SM	HI-1060	27	Corning
		PM	SM98-PS-U25	84	Fujikura/Corning
1260 - 1360 nm	31	SM	SMF-28	03	Corning
		PM	SM13-PS-U25	86	Fujikura/Corning
1460 - 1620 nm	55	SM	SMF-28	03	Corning
		PM	SM15-PS-U25	88	Fujikura/Corning

1 IL is 0.3 dB (1310 - 1550 nm), 0.5dB (1064 nm), or 0.8 dB (780 - 850 nm) higher, RL is 5 dB lower and ER is 2 dB lower (if applied) for each connector added.
2 If applied, the PM fiber and the connector key are aligned to the slow axis

Order code

	①		②	③	④	⑤		⑥	⑦		⑧				⑨	⑩	⑪
TAPM	-		-				-			-		X	-				

①	**Tap monitor type**	SM	PM	
	Code	S	P	

②③	**Fiber type**	Refer to the table above
	Code	-

④⑤	**Wavelength**	Refer to the table above
	Code	-

⑥⑦	**Tap ratio**	1/99%	2/98%	3/97%
	Code	01	02	03

⑧	**Package code**	250 µm bare fiber Ø3.5x26 mm	900 µm jacket Ø3.5x26 mm	250 µm bare fiber Ø5.5x26 mm	900 µm jacket Ø5.5x26 mm	250 µm bare fiber Ø6.5x26 mm	900 µm jacket Ø6.5x26 mm
	Code	1	A	2	B	3	C

⑨⑩	**Lead length**	1 m	1.5 m	etc
	Code	10	15	etc

⑪	**Connector Style**	None SM/PM	MU	ST	FC SM/PM	SC	LC	FC/ APC	SC/ APC	LC/ APC
	Code	0	1	2	3	4	5	6	7	A

Specifications are based on non-connectorized products. For connectorized specifications, please contact sales for details. Custom optical and mechanical configurations are available upon request.

For further information

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