HYPERION TECHNOLOGIES

ENGINEERED FOR PERFORMANCE

GD200

FSO INSTRUMENTS TNO

Gigabit Detector

The GD200 is a compact, high-performance detector, used in optical ground stations, capable of receiving data rates up to 10 Gbps.

Its low power dissipation, plug-and-play electrical interfaces and easy mounting make it ideal for use in Free-Space-Optical (FSO) terminals, ranging from optical communication ground stations to experimental setups for optical communication.

The GD200 Detector converts data contained in laser beams into a digital bitstream, ready to be processed by a high-speed data handling system. It comes with an optional connecting cable for the telemetry interface, coaxial or optical fibre, with a length of up to 10m.

HIGHLIGHTS

- High-speed optical-to-digital converter
  - 100 Mbps
  - 1 Gbps
  - 10 Gbps
- Optical sensitivity (BER 10^{-6}):
  - 100 Mbps: -40.5dBm
  - 1 Gbps: -37.5dBm
  - 10 Gbps: -30.5dBm
- High-speed digital interface: SFP+
- Command & telemetry interface: RS422

PARTNERS

This product is supported by TNO and FSO Instruments. TNO is a research institute with a strong heritage in high-performance optics, amongst others in optical communication. FSO Instruments a consortium of select Dutch companies providing laser communication equipment.

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SPECIFICATIONS

Performance				
	100 Mbps	**1 Gbps**	**10 Gbps**	
Optical wavelength		1000-1600[1]		nm
Data rate	10-100	10-1000	10-10000	Mbps
Optical sensitivity	-40.5 [3]	-37.5 [2]	-30.5	dBm
Detector active area diameter	75	75	26	µm
Exernal Connections				
Optical front mount	Thorlabs 30mm cage system and Thorlabs 1" tube mount			
Mechanical bottom mount	Precision dowel pins			
Control and telemetry interface	RS422			
High-speed data interface	SFP+			
Dimensions				
Outer dimensions[5]	75 x 40 x 40			mm
Mass	< 200			g
Environmental				
Operating temperature	0 - 40 [4]			°C
Electrical				
	Min.	**Typ.**	**Max.**	
Supply voltage	4.5	5	8	V
Power consumption (module only)		0.25		W
Power consumption (including SFP+ module)			2.5	W

[1] All performance specified at 1500-1600nm
[2] BER 10^{-6}, total power that is projected onto the detector active area (includes cover lens losses)
[3] BER 10^{-6}, estimate, to be verified by testing
[4] All performance measured at room temperature, around 20 °C
[5] Including connector socket, the length is 82.5mm

For pricing, delivery, configuration and ordering information please contact us at **sales@hyperion.space** or call us at **+31(0)15-5160905**