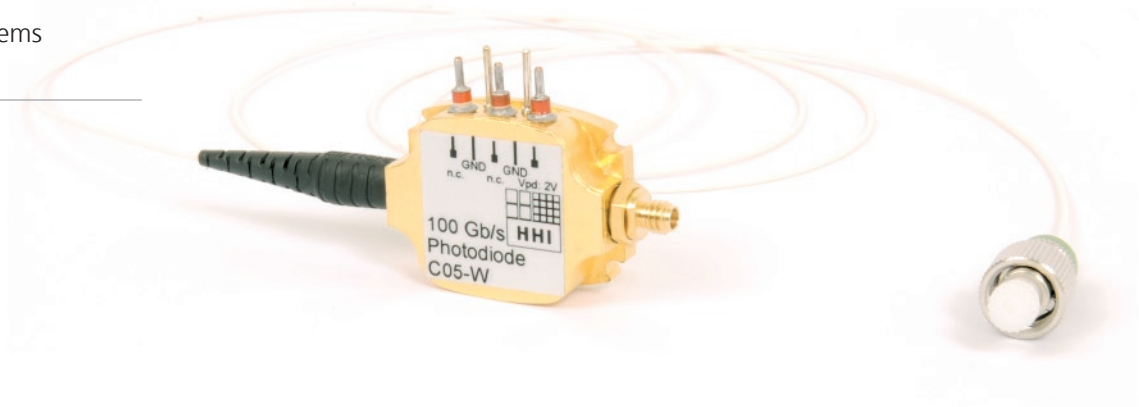
Fraunhofer
Heinrich Hertz Institute

107/160 Gbit/s PHOTODETECTOR MODULE

AT A GLANCE

- Datarates of 100 Gbit/s and higher in fibercom and measurement systems



Features

- O/E RZ conversion up to 107 Gbit/s
- O/E NRZ conversion up to 160 Gbit/s
- Only 2 V operating voltage
- Wavelength range 1480 – 1620 nm
- comprises PD chips with more than 100 GHz bandwidth
- Integrated bias-T
- Packaged into handy modules with fibre pigtail (FC/PC) and a female 1mm connector

Applications

- Telecom
- Datacom
- Measurement

REFERENCES

Lecroy
INTEC Gent
University of California, Berkeley
Universität Karlsruhe

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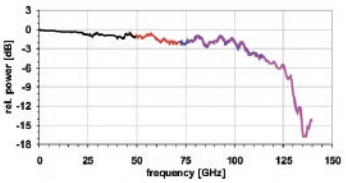
Typical Specifications

Responsivity	0.6 A/W
3 dB bandwidth	90 GHz
PDL	0.4 dB
Power linearity	12 dBm (at 1 dB compression)
Pulse width	7.5 ps
Optical return loss	25 dB

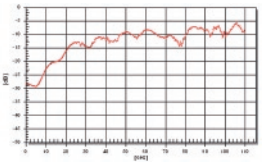
Miscellaneous Features

Operating bias	2 V (3 V maximum), ESD protected
Output match	to 50 Ω (integrated)
Electrical coupling	DC
Optical input	FC/PC (or customer specific)
RF output	1 mm female (Agilent)
Max. optical input	16 dBm

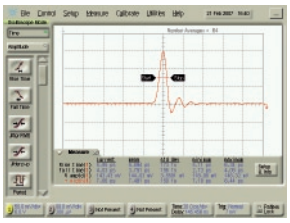
Bandwidth



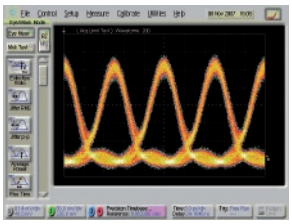
Output Reflection



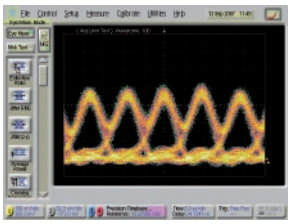
Pulse Behaviour



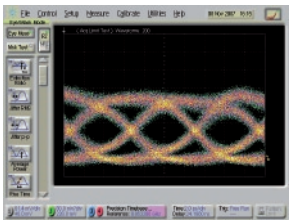
Eye Pattern at 80



107



160 Gbit/s Datarates



measured at +10 dBm optical input, PRBS 2^7-1,
opt. input pulses RZ: 2.6 ps, OTDM multiplexed,
recorded with scope: 70 GHz Agilent 86100B with 86118A.

The Fraunhofer HHI

One of the prime research and development foci of the Fraunhofer Heinrich Hertz Institute lies in photonic networks, components and systems and their application in fields such as digital media.

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