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Product Data Sheet

Key Highlights:

- **Type:** SFP28
- **Compatibility:** Multi-Vendor MSA Compatible
- **Tx Wavelength:** 1270 nm
- **Rx Wavelenght:** 1330 nm
- **Transmitter Type:** DFB Laser
- **Media Type:** Single-Mode Fiber (SMF)
- **Connectors:** Single LC
- **Optical Budget:** 13.3 dB
- **Max. Distance:** 20km
- **Data Rate:** 8.5-28.1 Gbps
- **DDM/DOM:** Supported
- **Power Consumption:** <1.2W
- **Temperature:** Standard 0°-70°C

Optical Transceiver: BIDI-25GFH-SFP28-20A

Product Description:

BIDI-25GFH-SFP28-20A is a Tx:1270nm Rx:1330nm BIDI 25GE LR 20km eCPRI (enhanced CPRI) / CPRI Fronthaul Multi-Vendor MSA Compatible SFP28 (Small Form-Factor Pluggable 28) Transceiver, operating over Single Fiber Single-Mode Fiber (SMF) optical cable. It has minimum guaranteed optical budget of 13.3 dB, which in most cases is enough to reach 20 km over OS2 fiber. However, distance is just indicative parameter for comfort of identification that is calculated by taking into account minimal optical budget and average attenuation of optical cabling in industry. BIDI-25GFH-SFP28-20A uses top quality DFB (Distributed Feedback Laser) transmitter and 25Gb/s PIN photodiode receiver. BIDI-25GFH-SFP28-20A BIDI 25GE LR 20km eCPRI / CPRI supports DDM/DOM optical diagnostics that provide real-time diagnostic information about the present operating conditions. BIDI-25GFH-SFP28-20A operates in Standard 0°-70°C temperature range and has Single LC interface. BIDI-25GFH-SFP28-20A BIDI 25GE LR 20km eCPRI / CPRI SFP28 support 8.5-28.1 Gbps data rate and eCPRI / CPRI Option 10 (24.33 Gbps), CPRI Option 9 (12.165 Gbps), CPRI Option 8 (10.138 Gbps), CPRI option 7 (9.830 Gbps) applications. BIDI-25GFH-SFP28-20A SFP28 Single Fiber optical transceiver is multi-purpose module used in number of different places of today's networking. Consequently, most popular use cases are in Mobile Carrier Networks, thus 5G fronthaul and O-RAN (open radio access network) applications.

BIDI-25GFH-SFP28-20A BIDI 25GE LR 20km eCPRI / CPRI SFP28 transceiver is CE/RoHS certified and is compliant with product safety standards. BIDI-25GFH-SFP28-20A is fully compliant to SFF-8431 and SFF-8472 Multi Source Agreement (MSA), eCPRI, CPRI and IEEE 802.3by 25 Gb/s specification. Consequently, compliance to above standards guarantees that module is compatible and works with majority of networking equipment, where is not implemented special algorithm for protection against third party modules. However - our technical team has accumulated deep expertise in custom-encoded firmware's for BIDI 25GE LR 20km eCPRI / CPRI SFP28 transceiver in order to make it work in almost any brand equipment. We will be glad to know your requirements.

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Product Data Sheet

Product Specification:

General Parameter	Value
Media Type:	Single-Mode Fiber (SMF)
Connectors:	Single LC
Tx Wavelength:	1270 nm
Rx Wavelength:	1330 nm
Minimum Optical Budget:	13.3 dB
Maximum Distance:	20km
Supported Data Rate:	8.5-28.1 Gbps
Supported Applications:	CPRI Option 10 (24.33 Gbps), CPRI Option 9 (12.165 Gbps), CPRI Option 8 (10.138 Gbps), CPRI option 7 (9.830 Gbps)
Modulation Format:	NRZ
DDM/DOM:	Supported
CDR (Clock and Data Recovery):	Supported
Operating Temperature Range:	Standard 0°-70°C
Storage Temperature Range:	-40° to 85°C
Relative Humidity (Non-Condensation):	0 to 85%
Power Consumption:	<1.2W
Power Supply Voltage Typical:	+3.3V single power supply
Power Supply Voltage Range:	3.14 to 3.46V
Supply Current (Max):	330 mA
Chipset:	Macom, Oclaro, Renesas Electronics, II-VI, Neo, Maxim, Sumitomo, Semtech
Compliance:	SFP+ MSA, SFF-8402, SFF-8472, SFF-8431, SFF-8432, CE, RoHS-6, Class 1 FDA and IEC60825-1 Laser Safety Compliant
MTBF value at 35 °C:	1'000'000 Hours.

Transmitter Parameters	Value
Transmitter Type:	DFB Laser
Tx Wavelength Bandwidth:	20nm (1260-1280 nm)
Average Optical Power (Min):	0 dBm
Average Optical Power (Max):	5 dBm
Spectral Width (RMS) (Max):	1nm
Extinction Ratio (Min):	3.5 dB
Relative Intensity Noise:	-130 dB/Hz

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Product Data Sheet

Transmitter Parameters	Value
Input differential impedance (Max):	100 Ohm
Single ended data input swing (Min):	180 mV
Single ended data input swing (Max):	800 mV
Transmit Disable Voltage (Min):	Vcc–1.3 V
Transmit Disable Voltage (Max):	Vcc V
Transmit Enable Voltage (Min):	Vee V
Transmit Enable Voltage (Max):	Vee+ 0.8 V

Receiver Parameters	Value
Receiver Type:	PIN photodiode
Rx Wavelength Bandwidth:	20 nm (1320-1340 nm)
Receiver Sensitivity (Max):	-13.3 dBm
Receiver Overload:	0.5 dBm
LOS Assert (Min):	-30 dBm
LOS De-Assert (Max):	-14 dBm
LOS Hysteresis (Min):	0.5 dB
Differential data output swing (Min):	185 mV
Differential data output swing (Max):	425 mV
LOS Fault (Max):	Vcc–1.3 V
LOS Normal (Min):	VccHOST V
LOS Normal (Max):	Vee V

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Product Data Sheet

Compatibility:

EDGE Optical transceivers can be provided with custom-encoded firmware, in order to provide compatibility with more then 100 vendor brands in data and telecom communications industry:

MS - General MSA
AD - ADVA
AE - Advantech
AL - Alcatel (Nokia)
AT - Allied Telesis
AR - Arista
AS - Arris
AV - Avaya
BC - Barracuda
BR - Broadcom
QL - Cavium (Qlogic)
CR- Ceragon
CP - Checkpoint
CH - Chelsio
CN - Ciena
CI - Cisco
LI - Cisco (Linksys)
CE - Comnet
CO - Coriant
DH - Dahua
DC - DCN
DL - Dell & Force10
DK - D-Link

DZ - DZS(Dasan-Zhone)
EI - ECI
EC - EdgeCore
EW - EdgeWare
EL - Eltex
EM - EMC2
EN - Enterasys
ER - Ericsson
EF - EXFO
EX - Extreme Networks
F5 - F5 Networks
FI - Finisar
FO - Fortinet
FU - Fujitsu
H3 - H3C
HI - Hirschmann
HU - Huawei
IB - IBM
IF - Infinera
IN - Intel
IX - Ixia
JU - Juniper Networks
KM - KeyMile

KY - KyLand
LN - Lenovo
ML - Mellanox
ME - Meraki (Cisco)
MT - MikroTik
MO - Moxa
MR - MRV
NC - NEC
NG - Netgear
NK - Nokia
NT - Nortel
NS - NSN
OR - Oracle
PA - Palo Alto Network
PL - Planet
QC - QCT(Quanta)
QN - QNAP
RD - RAD
RW - RadWare
RC - Raisecom
RK - Ruckus
RU - Ruijie Networks
SG - Samsung

SV - Sandvine
SC - Silicom
SF - SolarFlare
SW - Sonicwall
SM - Supermicro
SY - Synology
TC - Telco Systems
TP - TP-LINK
TN - Trendnet
UN - Ubiquiti Networks
VX - VeEx
WG - WatchGuard
WS - Waystream
WT - Westermo
ZT - ZTE
ZX - Zyxel
HP - HP
AG - Avago
OC - Oclaro
EU - Emulex
TM - Transmode
AU - HP Aruba
XX - Other

Warranty:

EDGE Optic's provides a limited **warranty for sixty (60) months** from Purchaser's receipt of the Equipment represented in this data sheet against defective design or workmanship. Warranty does not cover damage caused by improper deployment, misuse and accidents.

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