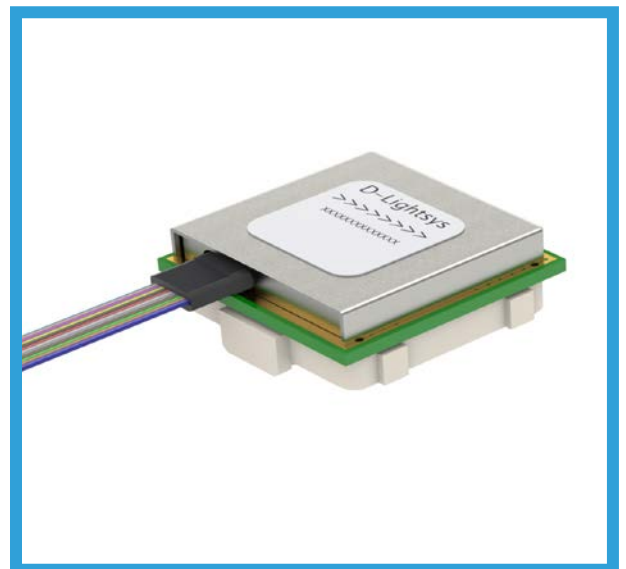


PRODUCT BRIEF

D-Lightsys® 12-channel receiver DR-12

- 12-channel optical receiver
- 1 to 10.31 Gbps per channel
- Protocol agnostic
- Pluggable electrical socket interface
- Pigtailed optical ribbon
- Qualified for industrial temperatures from -40 to +85 °C
- Temperature compensation for performance optimization in severe environments
- Qualified per MIL-STD-810 and MIL-STD-883



PRODUCT BRIEF

D-Lightsys® 12-channel receiver DR-12

PAGE: 1/4 REVISION: 1.0 ISSUE: PART NUMBER:

Product Description

DR-12 parallel optoelectronic modules receive high data rate signals on 12 independent channels.

- Optimized for short distance, high data rate optical communications on multimode ribbon fiber and compliant with ARINC 804 and MIL-STD standards
- Protocol independent and can be applied to 10 Gigabit Ethernet (both 1 GBE and 10 GBE), Fibre Channel, InfiniBand QDR, DDR, XAUI or any specific communication application
- Operates within the temperature range [-40 to +85 °C]
- Integrates state-of-the-art 850 nm GaAs VCSEL arrays and is optimized for low power consumption
- Available with 50/125 and 62.5/125 µm fiber ribbon pigtail termination around the standardized MT ferrule

Markets and Applications

D-Lightsys® DR-12 modules are embedded in many defense and aeronautic applications:

- Digital video transmissions
- Interconnect sensors
- Radar
- Data processing
- Industrial data links

Customer Benefits

- Very compact packaging (16.4 x 16.4 x 8.6 mm)
- Low optical sensitivity: < -12 dBm @ 10.31 Gbps (BER < 10⁻¹²)
- Ribbon length and optical contact upon request
- Hot pluggable (plug and play)
- Supports non-standard protocols
- No mandatory heat sink for customer
- Programmable output swing/pre-emphasis functions that enable the module to handle long trace transmission
- Very low power consumption: typical 90 mW per channel

PRODUCT BRIEF

D-Lightsys® 12-channel receiver DR-12



PAGE: 2/4

REVISION: 1.0

ISSUE:

PART NUMBER:

Key Specifications

General Specifications

Parameter	Symbol	Min	Typ.	Max	Unit	Notes
Supply voltage (VCC1&2)	$V_{CC1\&2}$	3.0	3.3	3.6	V	
Supply current	I_{CC}	-	380	450	mA	
Power consumption	12 channels	P_{tot}	-	1080	-	mW
	Per channel	P_{ch}	-	90	-	mW
Data rate per channel DR-12-255	B	1.0	-	4.25	Gbps	
Data rate per channel DR-12-1000	B	1.0	-	10.31	Gbps	Operating up to 12Gbps
Qualified temperature	T_{op}	-40	-	+85	°C	

Optical Specification

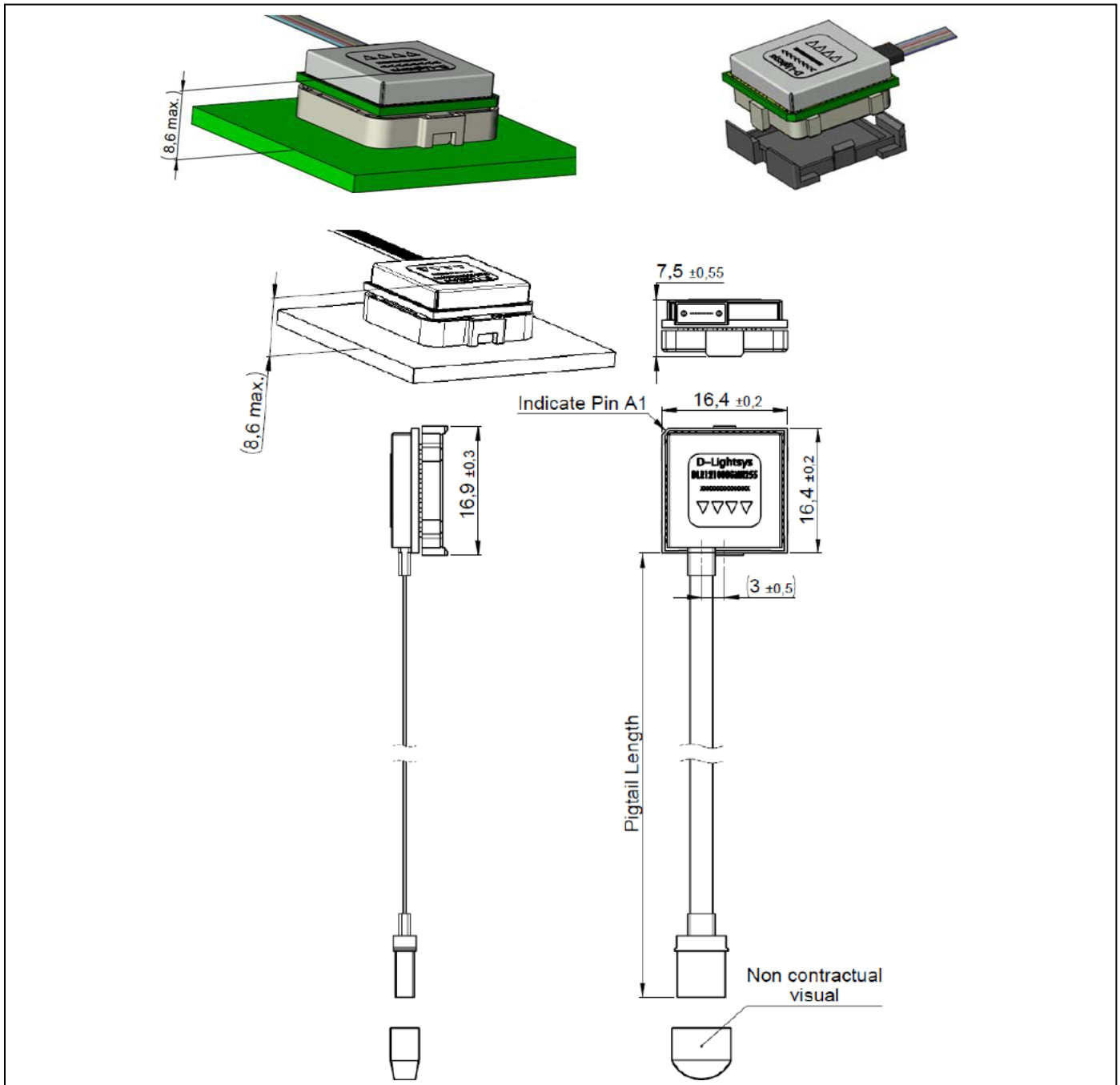
Parameter	Symbol	Min	Typ.	Max	Unit	Notes
Center wavelength	λ_c	830	850	860	nm	-
Core diameter of the optical fiber ribbon	D_c	50	-	62.5	μm	OM1/OM2/ OM3
Receiver Sensitivity	10.31Gbps	P_{inMin}	-14	-12	dBm	BER<10 ⁻¹²
	4.25Gbps	P_{inMin}	-16	-15	dBm	

PRODUCT BRIEF

D-Lightsys® 12-channel receiver DR-12

PAGE: 3/4 REVISION: 1.0 ISSUE: PART NUMBER:

Package and Interfaces



PRODUCT BRIEF

D-Lightsys® 12-channel receiver DR-12

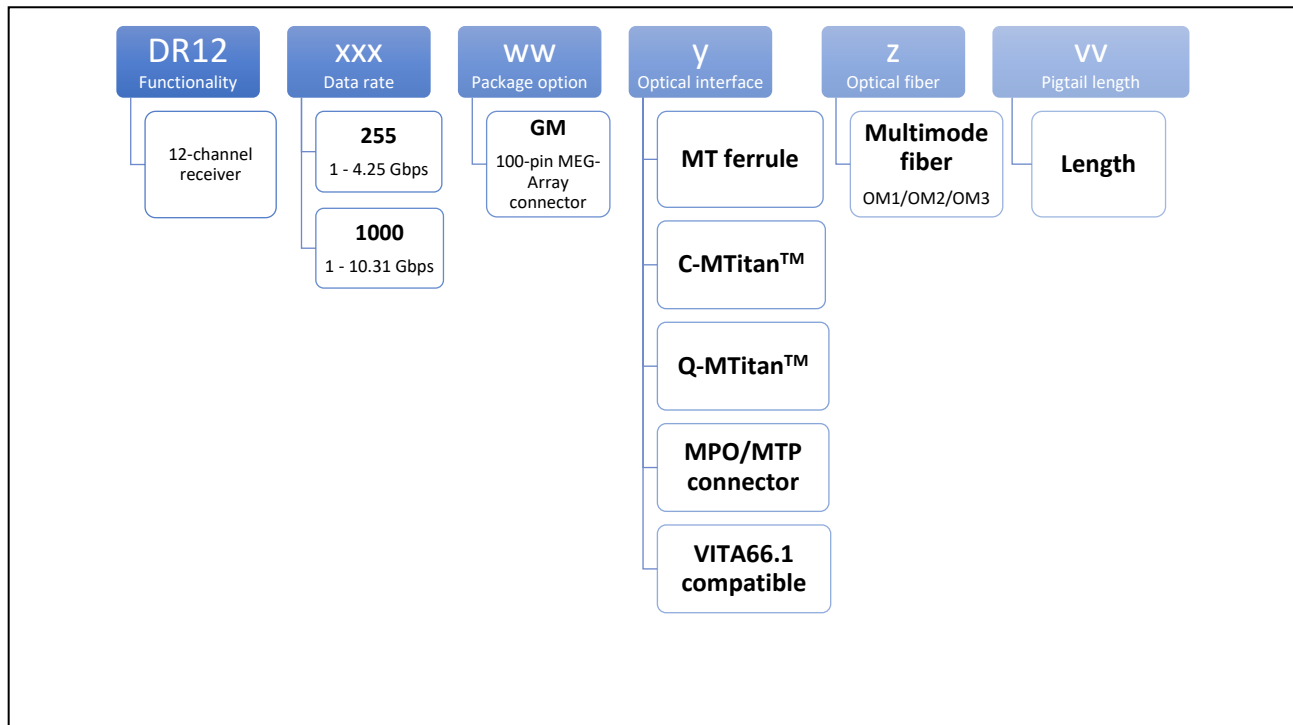
PAGE: 4/4

REVISION: 1.0

ISSUE:

PART NUMBER:

Ordering Information



Contacts

Sales:

For Europe: info@radiall.com

For USA: infousa@radiall.com

For Asia: infohk@radiall.com

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