

# Optical Node Series

## TR4580-xx-PI

### DWDM Optical Transceiver Module (SFP)

## FEATURES

- Interconnects ARRIS digital transport devices
- Media converter access products for links up to 120 km
- Selected node-based Digital Transceivers (models DT4xxxN-01 and DT4250N) for links up to 120 km
- From 1 Gbps to 2.125 Gbps data throughput
- Pluggable SFP MSA footprint
- Duplex LC connector
- Very low jitter
- Metal enclosure for lower EMI
- 3.3 V power supply with low power dissipation
- Extended operating temperature range
- Cold start wavelength compliance (INF-8478i)



## PRODUCT OVERVIEW

ARRIS TR4580 series DWDM Optical Transceiver Modules enable additional capabilities for high-speed communications required for selected ARRIS' digital networking products such as media converter access products, legacy DT4xxx-01 Digital Transceivers, and the DT4250N Universal Digital Transceiver. These transceiver modules are functionally identical to the transceivers already built into many of ARRIS' products, but provide a flexible, plug-in means of enabling additional optional secondary ports in several of those products.

Conforming to the Small Form Factor Pluggable (SFP) Multisource Agreement, these state-of-the-art components are designed expressly for high-speed bi-directional communication applications that require rates from 1 Gbps to 2.125 Gbps, with the laser transmission portion of the device operating at one of 40 available ITU-compliant (G.694.1) DWDM wavelengths.

TR4580 series modules feature a very low jitter contribution, resulting in extremely clean, high-quality eye patterns. And the modules' metal enclosure not only makes them sturdier, but also improves their FCC test margins. This emission and ESD control is particularly important in applications with sensitive multiport hubs and switches. The modules, which dissipate less than 1.5 W, are supplied with a duplex LC connector.

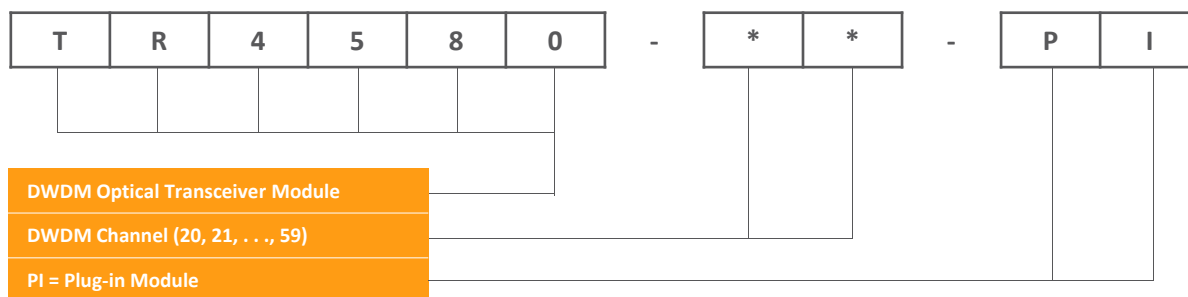
#### RELATED PRODUCTS

Digital Return Transmitter	Optical Patch Cords
Optical Nodes	Optical Passives
Fiber Service Cable	Installation Services

**SPECIFICATIONS**

Characteristics	Specification
<b>Physical</b>	
Dimensions	2.2" L x 0.4" H x 0.5" W (5.6 cm x 1.0 cm x 1.3 cm)
Weight	0.1 lbs (0.05 kg)
<b>Environmental</b>	
Application temperature range	-40° to +85° C (-40° to 185° F)
Storage temperature range	-40° to +85° C (-40° to 185° F)
Humidity	5% to 95% non-condensing
<b>Optical Interface</b>	
Optical connectors	Duplex LC
<b>Power Requirement</b>	
Input voltage	3.3 V <sub>DC</sub>
Power consumption	1.5 W max
<b>General</b>	
Data rate	From 1 Gbps to 2.125 Gb/s
Hot plug-in/out	
Supported link length	120 km (on SMF-28 or equivalent)
NOTE	This is strictly a dispersion limitation. Actual transmission distance is also dictated by the power budget of each transmission link. EDFAs and Dispersion Compensation Modules are suitable for use with the TR4580-xx-PI.
<b>Optical Interface</b>	
Transmitter	
Transmitter type	Cooled DFB
DWDM channels	40 channels (20 through 59) (Center wavelengths per ITU-T G.694.1)
Wavelength stability, EOL	± 0.1 nm
Optical output power	+3 dBm min
Optical extinction ratio (ER)	8.2 dB min (PRBS 2 <sup>23</sup> -1 at 2.125 Gbps, BER < 10 <sup>-12</sup> , 120 km SMF-28 )
Dispersion penalty	3 dB
Receiver	
Receiver sensitivity	-29 dBm max
Optical center wavelength	1525–1565 nm
Maximum input power	-8 dBm
<b>Regulatory</b>	
	Class 1 device per FDA/CDRH and IEC-825-1 laser safety regulations

**ORDERING INFORMATION**



**CAUTION**  
 TR4580-xx-PI transceiver modules are currently intended for use *ONLY* in media converter access products, DT4xxx-01 series, and DT4250N Digital Transceiver modules for optical nodes.

**Note:** Specifications are subject to change without notice.

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**Customer Care**

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