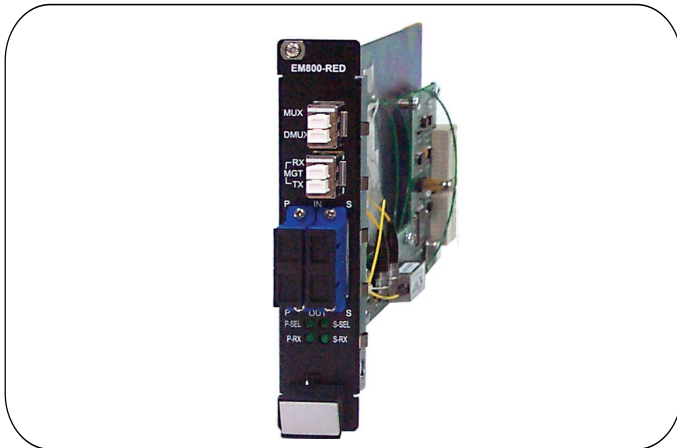


LambdaDriver® - 1+1 redundancy Module (EM800/EM1600-RED)



EM800-RED

Features

- Singlemode optical fiber connectivity
- Less than 25 ms link protection switchover
- Hot-swappable
- 1-slot size

Applications

- Point to point protection link
- DWDM, CWDM networks
- Any fiber optic link protection

Overview

Survivability of optical connections has grown into an issue of the greatest importance for WDM networks as well as for any other optical communication technology. The interruption of high-speed optical connection even for a few seconds means a huge waste of data information. Network operators have therefore to face their customer's requirements, which are very stringent as to outage periods.

One of the most popular protection techniques is 1+1 dedicated protection, also known as self-healing. The source node splits the signal into two identical copies transmitting them simultaneously on two separate light paths. The receiver node selects the signal with the best quality.

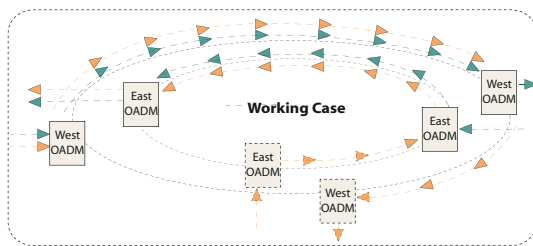
The 1+1 Redundancy module is part of the LambdaDriver® product line. The switchover time is lower than 25 ms, which is much better than the STM requirement of 50 ms. The switching is performed when the monitored link signal is below the pre-defined optical signal threshold.

The module is fully manageable by the LambdaDriver management module and can be accessed also by MegaVision® (MRV's web-based NMS) or any other SNMP manager. The module reports the current status of Primary/Secondary link to the management. The module can be switched over from Secondary to Primary and vice versa by a command from management.

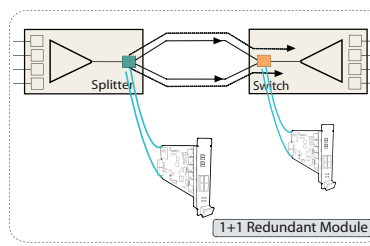
There is an option for having Optical Supervisory Channel (OSC) included on the module. In this case, the module includes, besides the protection function, 1310/1550nm splitting/combination.

There are two types of modules:

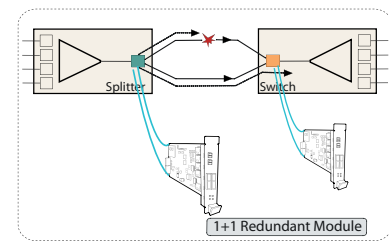
- EM800-RED – LD800 slot size
- EM1600-RED – LD1600 long slot size



Link protected network operating with unbroken redundant link



Link protected network operating with broken redundant link



Environmental

Operating Temperature	- 5 to 45 °C
Storage Temperature	-10 to 70 °C
Relative Humidity	85% maximum, non-condensing
Dimensions (W x H x D)	EM800: W: 26.93 mm (1.06 in); H: 130.7 mm (5.145 in); D: 227 mm (8.956 in) EM1600: 26.93 mm (2.13 in); 263.4 mm (5.145 in); 227 mm (8.956 in)
Weight	EM800: 0.42kg (0.93 lb) EM1600: 0.84kg (1.85 lb)
Connector	Mux/DeMux section - MU Trunk – SC

Technical Specifications

Optical Specifications

Parameter	Value			Units
	Minimum	Typical	Maximum	
Wavelength Range	1270		1625	nm
Maximum insertion loss				dB
RED TX			3.5	
RX			2	
RED/NS TX			2.5	
RX			1	
Maximum link switchover time			25	ms
Power consumption	1 Watt			

Management

Front panel LEDs	Primary/Secondary link status, Primary/Secondary link selection status
Power Monitoring	Input power, Output power
Alarm	Primary/Secondary link switchover
Command	Primary/Secondary link switchover

Order Info

EM800-RED	Redundant link module for LD800
EM800-RED/NS	Redundant link module for LD800 without OSC
EM1600-RED	Redundant link module for LD1600
EM1600-RED/NS	Redundant link module for LD1600 without OSC

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