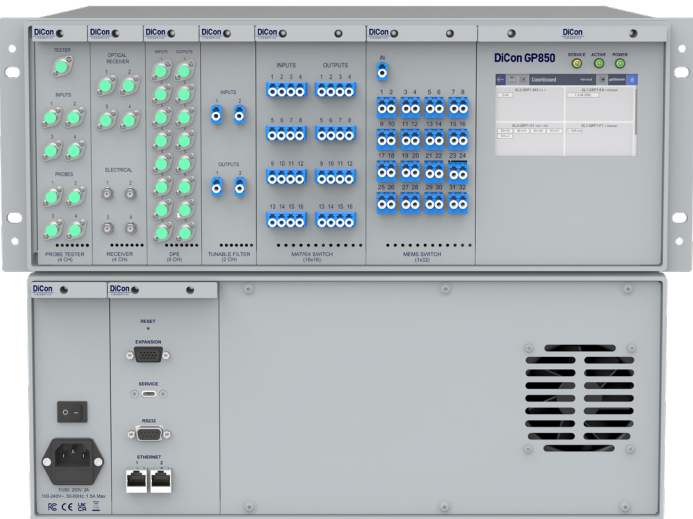


GP850 MODULAR PDV SYSTEM GP850 Chassis



DiCon's **PDV Modular System** is a flexible and user configurable rackmount platform. It integrates many required optical components used in the Photonic Doppler Velocimetry (PDV) technique. The modular chassis is field serviceable and comes with a swappable controller and a swappable power supply. Each system has 8 slots available to house and control a wide array of plug-and-play modules, making the PDVM easy to configure for optimal PDV measurements.

- Plug and Play Modularity
- Intuitive Front Panel
- Ethernet, RS-232, or Web GUI
- Front or Rear Loading Options
- Expandable with Additional Chassis

OPTICAL SPECIFICATIONS

Fiber Type	9/125 um Single Mode
Operating Wavelength	1530 to 1570 nm
Back Reflection	-50 dB max.

CHASSIS SPECIFICATIONS

Chassis Type	19", 4U Extended Rackmount
Plug-In Module Slots	8 per Chassis

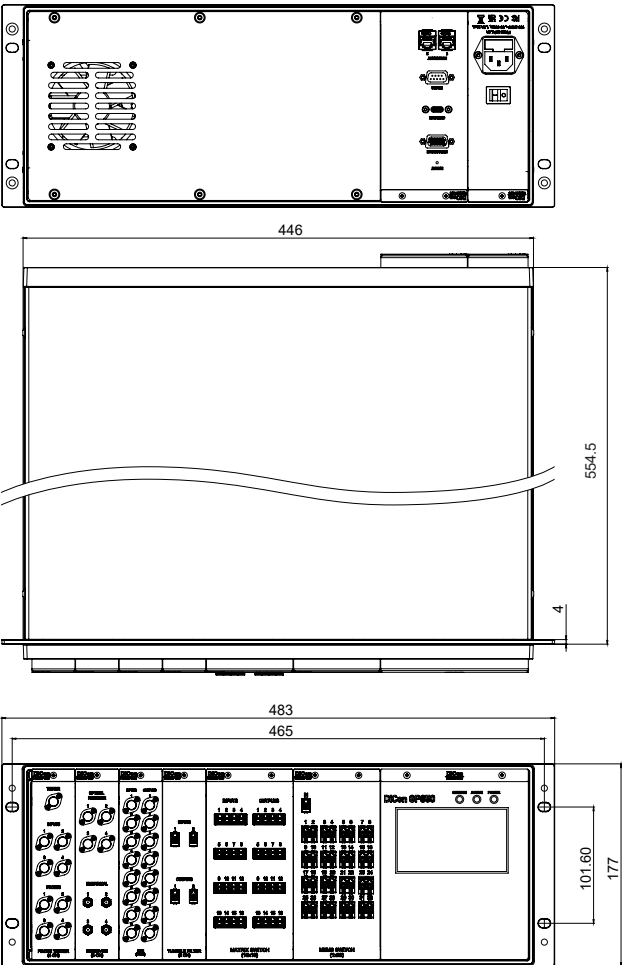
ORDERING INFORMATION

GP850 - - -

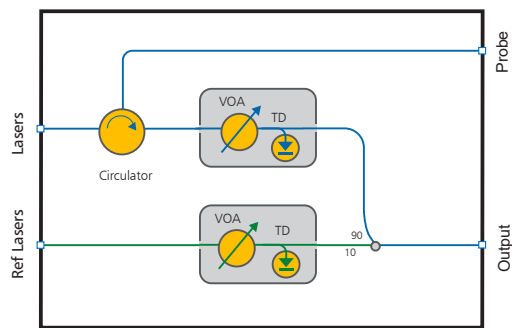
Type	
CS	Chassis (Main)
EC	Expansion Chassis
PSU	
A1	AC 100-240V Single
D1	DC -48V Single
A2	AC 100-240V Redundant
D2	DC -48V Redundant
Slot Card Location	
F	Front Loading
R	Rear Loading

MECHANICAL SPECIFICATIONS

Dimensions in mm



GP850 PDV Slot Card - Mixer (1 Fiber Probe Per Channel)



ORDERING INFORMATION

GP850 - SL - PDV - MX1 - -

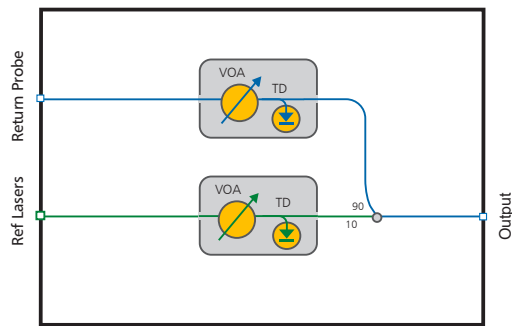
No. of Channels	
1	1 CH
2	2 CH
4	4 CH
Connector Type	

FC/APC FC/APC
LC/APC LC/APC

Insertion Loss (IL) ¹	Laser to Probe	0.8 dB max.
	Probe to Output	2.8 dB max.
	Ref to Output	11.8 dB max.
Attenuation Range		30 dB min.
Measurable Power Range		-50 to +22 dBm
Input Power Range		Dark to +27 dBm

1. Test Wavelength at 1550 nm. Measured with 3-jumper method or equivalent.
See TIA/EIA 526-7

GP850 PDV Slot Card - Mixer (2 Fiber Probes Per Channel)



ORDERING INFORMATION

GP850 - SL - PDV - MX2 - -

No. of Channels	
1	1 CH
2	2 CH
4	4 CH
Connector Type	

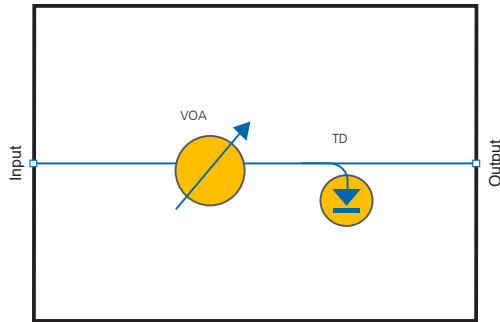
FC/APC FC/APC
LC/APC LC/APC

Insertion Loss (IL) ¹	Prob to Output	2.0 dB max.
	Ref to Output	11.8 dB max.
Attenuation Range		30 dB min.
Measurable Power Range		-50 to +22 dBm
Input Power Range		Dark to +27 dBm

1. Test Wavelength at 1550 nm. Measured with 3-jumper method or equivalent.
See TIA/EIA 526-7



GP850 PDV Slot Card - DPE (Dynamic Power Equalizer)



ORDERING INFORMATION

GP850 - SL - PDV - DPE - -

No. of Channels

1 1 CH
2 2 CH
4 4 CH

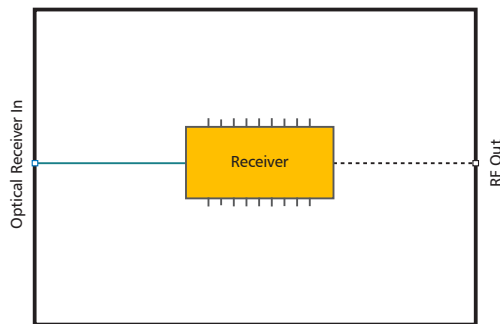
Connector Type

FC/APC FC/APC
LC/APC LC/APC

Insertion Loss (IL) ¹	0.9 dB max.
Attenuation Range	30 dB min.
Measurable Power Range	-50 to +22 dBm
Input Power Range	Dark to +27 dBm

1. Test Wavelength at 1550 nm. Measured with 3-jumper method or equivalent.
 See TIA/EIA 526-7

GP850 PDV Slot Card - Receiver



ORDERING INFORMATION

GP850 - SL - PDV - - -

Receiver

REC10 10 GHz Receiver
REC25 25 GHz Receiver
REC42 42 GHz Receiver

No. of Channels

1 1 CH
2 2 CH
4 4 CH

Connector Type

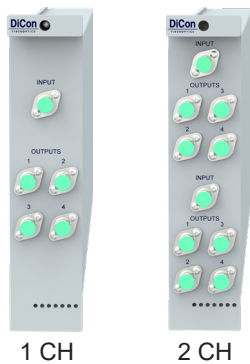
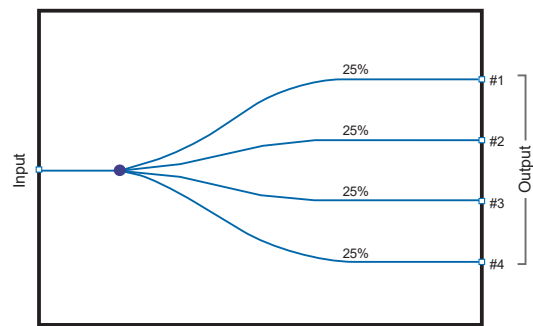
FC/APC FC/APC
LC/APC LC/APC

Receiver (10 GHz) ¹		Thorlabs RX10AF
Receiver (25 GHz) ^{2,3}		Thorlabs RX25AF
Receiver (42 GHz) ^{2,4}		Thorlabs RX42AF
Input Power Range ⁵	Receiver (10 GHz)	Dark to +6 dBm
	Receiver (25 GHz)	Dark to +10 dBm
	Receiver (42 GHz)	

- The amplifier and photodetector pins are biased at 3.3 VDC.
- This assembly operates in a single-ended configuration, using only the non-inverting GPPO output. However, the specification document for Thorlabs' receiver module lists the conversion gain and output swing parameters for differential operation, where both outputs are used. Divide the differential conversion gain and output swing by 2 to determine the single-ended specifications.
- Peaking Low (PKL) and Peaking High (PKH) are set to float and Gain Control Voltage (GC) is set to 2 V $\pm$ 0.1 V. Contact DiCon for different settings.
- Gain Control (GC) Voltage is set to 0.22 V. Contact DiCon for different settings.
- Do not exceed the maximum input power listed or damage to the receivers can occur. Ensure sufficient attenuation is set during operation.



GP850 PDV Slot Card - 1X4 Splitter



ORDERING INFORMATION

GP850 - SL - PDV - SPL4 - -

No. of Splitters

1	1
2	2

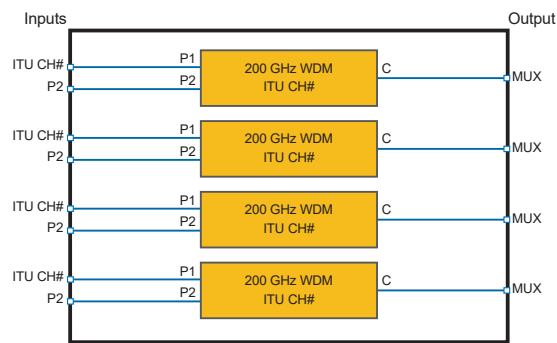
Connector Type

FC/APC	FC/APC
LC/APC	LC/APC

Insertion Loss (IL) ¹	7.0 dB max.
Input Power Range	Dark to +33 dBm

1. Test Wavelength at 1550 nm. Measured with 3-jumper method or equivalent.
See TIA/EIA 526-7

GP850 PDV Slot Card - 200 GHz ITU Channel 3-Port Mux



ORDERING INFORMATION

GP850 - SL - PDV - FW2 - -

200 GHz CH

X Specify 200 GHz ITU Channel Number for each of Mux
*Use "/" to add up to 4 individual WDM
For example: 32/38/40/40

Connector Type

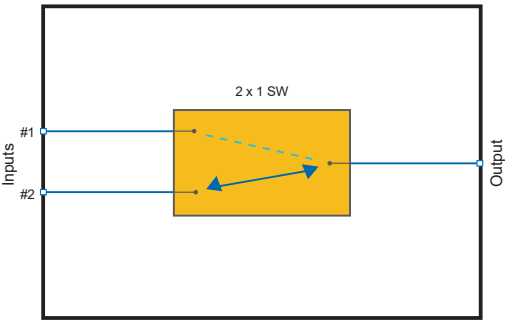
FC/APC	FC/APC
LC/APC	LC/APC

Insertion Loss (IL) ¹	P1-C	1.3 dB max.
	P2-C	0.6 dB max.
Passband	P1-C	0.5 dB min.
Input Power Range	Dark to +27 dBm	

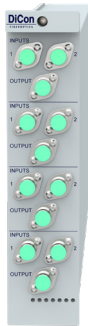
1. Test Wavelength at 1550 nm. Measured with 3-jumper method or equivalent.
See TIA/EIA 526-7



GP850 PDV Slot Card - 2X1 Switch



1 SW



4 SW

ORDERING INFORMATION

GP850 - SL - PDV - MS2x1 - -

No. of Switches

1	1
2	2
4	4

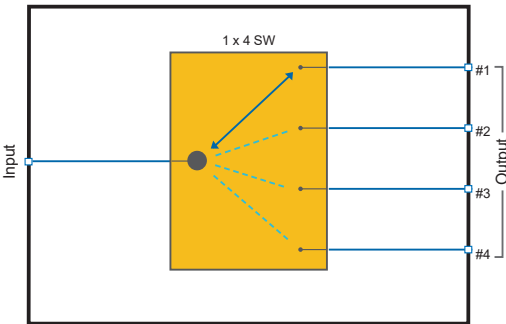
Connector Type

FC/APC	FC/APC
LC/APC	LC/APC

Insertion Loss (IL) ¹	0.6 dB max.
Crosstalk / Off State	-50 dB max.
Input Power Range	Dark to +27 dBm

1. Test Wavelength at 1550 nm. Measured with 3-jumper method or equivalent.
See TIA/EIA 526-7

GP850 PDV Slot Card - MEMS 1X4, 1X8 and 1X12 Switches



1X4



1X12

ORDERING INFORMATION

GP850 - SL - PDV - MS1x - 1 -

No. of Channels

4	1x4
8	1x8
12	1x12

Connector Type

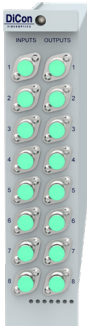
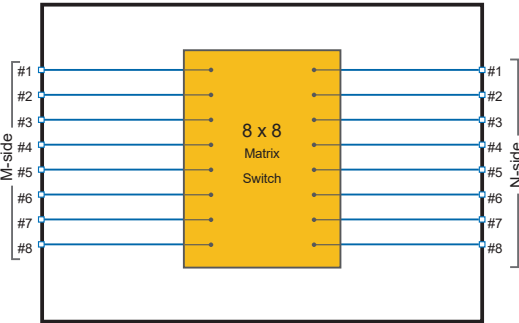
FC/APC	FC/APC
LC/APC	LC/APC

Insertion Loss (IL) ¹	0.8 dB max.
Crosstalk / Off State	-50 dB max.
Input Power Range	Dark to +27 dBm

1. Test Wavelength at 1550 nm. Measured with 3-jumper method or equivalent.
See TIA/EIA 526-7



GP850 PDV Slot Card - MEMS 8X8 Matrix Switch



8X8

ORDERING INFORMATION

GP850 - SL - PDV - SX8x8 - 1 -

Connector Type

FC/APC
LC/APC

Insertion Loss (IL) ¹	1.0 dB max.
Input Power Range	Dark to +27 dBm

1. Test Wavelength at 1550 nm. Measured with 3-jumper method or equivalent.
See TIA/EIA 526-7

