850 nm 4.25 G LC ROSA

PL-SLR-00-SG3-Cx

Key Features

- **Multi-rate capable up to 4.25 Gbps**
- **Low power consumption with 15 mA typical operating current at 3.3V**
- **Optimized for -40 °C to 85 °C transceiver applications**
- **Differential output**
- **Optional 5th lead for Received Signal Strength Indicator (RSSI)**
- **LC connectorized PIN plus preamplifier**

Benefits

- RSSI for digital diagnostics transceiver applications
- Excellent sensitivity
- Fully tested for optimum alignment and performance
- Industrial temperature operation
- Industry standard form factor and size

The JDSU 850 nm LC connectorized ROSA (Receiver Optical Sub-Assembly) is designed for high-speed data communication applications in 4.25 G Fibre Channel transceiver modules. The product utilizes a GaAs PIN/TIA integrated in a TO-46 package aligned to a precision plastic LC barrel. Each part is electro-optically tested to ensure the highest level of performance and sensitivity.

The PL-SLR-00-SG3-Cx converts optical power into an electrical signal at data rates up to 4.25 Gbps. This ROSA is engineered for performance over extended operating temperature and power conditions with high reliability. It can be used with 50/125 µm and 62.5/125 µm multi-mode fiber.

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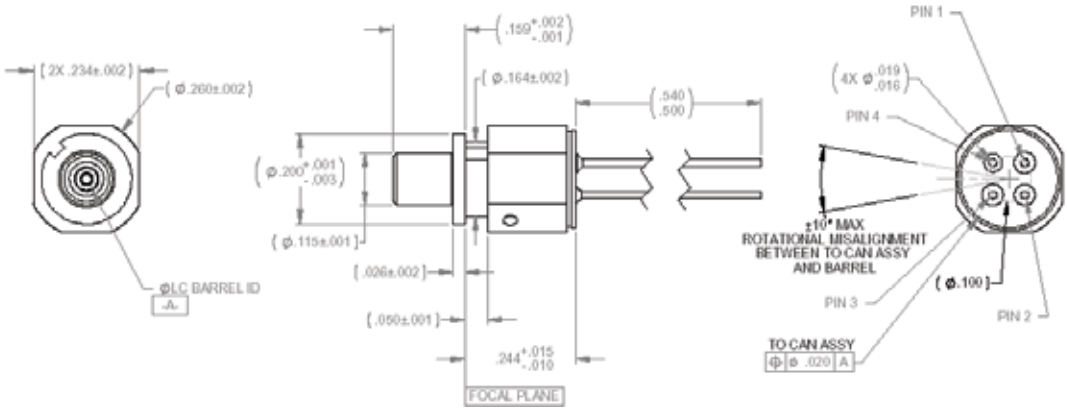
Mounting Dimensions

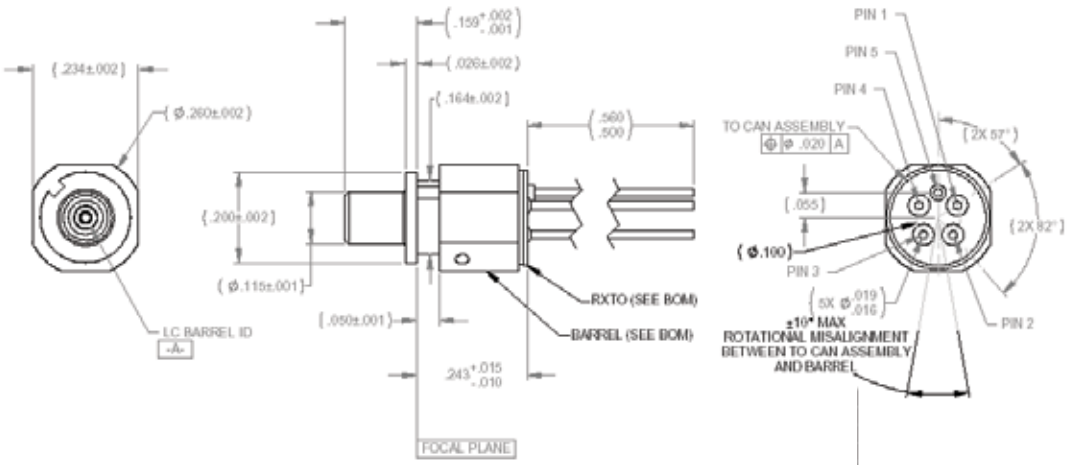
4 Lead Version (PL-SLR-00-SG3-C0)



PL-SLR-00-SG3-C0

Pin	Symbol	Function
1	Vout-P	TIA Output Voltage (Non-Inverted)
2	Vdd	Positive Supply Voltage
3	Vout-N	TIA Output Voltage (Inverted)
4	GND	Ground, Case

5 Lead Version (PL-SLR-00-SG3-C1)



PL-SLR-00-L23-C1

Pin	Symbol	Function
1	Vout-P	TIA Output Voltage (Non-Inverted)
2	Vdd	Positive Supply Voltage
3*	RSSI	Average Power Monitor Current
4	Vout-N	TIA Output Voltage (Inverted)
5	GND	Ground, Case

***RSSI Pin 3 Connection**

-C1: Connect Pin 3 to ground with a resistor <2500Ω

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Shipping Information

Shipped in anti-static stackable trays. 50 pieces per tray.

Absolute Maximum Ratings

(Vdd=3.3 V, T_{case} = 25 °C unless otherwise stated)

Parameter	Symbol	Ratings	Unit
Storage temperature	T_{st}	-40 to +125	°C
Incident optical power	P_{in}	+6	dBm
Lead solder temperature	T_S	260 °C for 10 sec. 2 mm from case	
Power supply voltage	V_P	3.8	V
ESD[1]		Class 1	

Note:
Conditions exceeding those listed may cause permanent damage to the device. Devices subjected to conditions beyond the limits specified for extended periods of time may adversely affect reliability.

1. HBM

Electro-optical Characteristics

(Vdd=3.3 V, T_{case} = -40 °C to 85 °C unless otherwise stated)

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Wavelength responsivity	λ	770	850	860	nm
Case operating temperature	T_{op}	-40		85	°C
Supply voltage	V_{cc}	2.97	3.3	3.63	V
Supply current	I_{cc}		15		mA
Bandwidth[1]	BW	3.2			GHz
Low frequency cutoff	BW_{LF}		40		kHz
Responsivity (@50 MHz, differential)[1]	R		1350		V/W
Sensitivity[2]	S		-21		dBm
Output resistance	R_o		50		Ω
Optical overload[2]		1			dBm
Differential output voltage[3]	V_{out}		200		mV
Duty cycle distortion[3]				5	%
Total jitter (pk-pk)[3, 4]	TJ		25		ps
Rise/Fall time[3]	t_r/t_f		60		ps
Slope of Imon vs P_{in}[5, 6]	I_{mon} slope		1		A/W
Imon current with zero input[5, 6]	I_{mon} offset		20	25	uA
Imon linearity range[5, 6]	I_{mon} range	5		1100	uA

1. P_{in} = -13 dBm, Rload - 100 Ω (differential)
2. 10^{-12} BER with a 2^7-1 PRBS @ 4.25 Gbps
3. 2^7-1 PRBS @ 4.25 Gbps, P_{in} = -3 dBm, Rload = 100 Ω (differential)
4. 6σ about the center eye crossing, P_{in} = -14 dBm
5. Average current , 1 kΩ pull down resistor
6. RSSI in 5 lead version only

Order Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

Sample: PL-SLR-00-SG3-C0

Part Number	Description
PL-SLR-00-SG3-C0	850 nm 4.25 G LC ROSA, low power
PL-SLR-00-SG3-C1	850 nm 4.25 G LC ROSA, low power with RSSI (5 lead)