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## 850nm 10Gbps 5Pin VCSEL LC-TOSA with Flex-board

### WG5H-902R-HI0 Series

#### TYPE NAME: WG5H-902R-HI0

#### Product Description:

The LuxNet WG5H-902R-HI0 TOSA (Transmitter Optical Subassembly) is designed for a high-speed, high-performance TOSA data communication and Fiber channel applications. This device is integrated with an 850nm VCSEL, TO header, and plastic lens port & Flex board. The product is designed for 10Gbps Fiber channel, transceiver modules and systems. The TO-can can be integrated with different types of ports that are engaged with a fiber connector to provide good coupling efficiency as light generated by the VCSEL is transmitted into multimode fiber.

#### Product Specifications:

##### Absolute Maximum Ratings

Parameter	Symbol	Unit	Min.	Max.	Note
Operating Temperature	$T_{op}$	°C	-10	85	
Storage Temperature	$T_{stg}$	°C	-40	85	
Solder Reflow Temperature	$T_s$	°C	-	260	10 seconds max.
Peak Forward Current	$I_{max}$	mA	-	12	
VCSEL Reverse Voltage	$V_r$	V	-	5	

##### Electro-Optical Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ	Max.	Test Condition
Threshold Current	$I_{th}$	mA	-	1.0	1.6	
			-	-	2.0	T=85°C
Forward Voltage	$V_f$	V	-	-	2.5	I <sub>op</sub> =6.5mA
Differential Series Resistance	$R_s$	Ω	-	-	120	I <sub>op</sub> =6.5mA
Peak Wavelength	$\lambda_p$	nm	840	850	860	I <sub>op</sub> =6.5mA
Spectral bandwidth (RMS)	$\Delta\lambda$	nm	-	-	0.45	I <sub>op</sub> =6.5mA
$\lambda_p$ Temp-Coeff.	$\Delta\lambda_p$	nm/K	-	0.06	-	
Rise Time / Fall Time	$\tau_r/\tau_f$	ps	-	50	60	I <sub>op</sub> = 6.5mA 20-80%
Peak Fiber Coupled Optical Power	$P_{oc}$	μW	600	-	800	I <sub>op</sub> =6.5mA peak, 50/125 μm fiber
Slope efficiency	mA/mW	SE	0.07		0.15	I <sub>op</sub> =6.5mA 50/125 μm Fiber

\* Specifications are subject to change without notice.

\* Screening per customer-specified reject limits is available.

Version 1.0

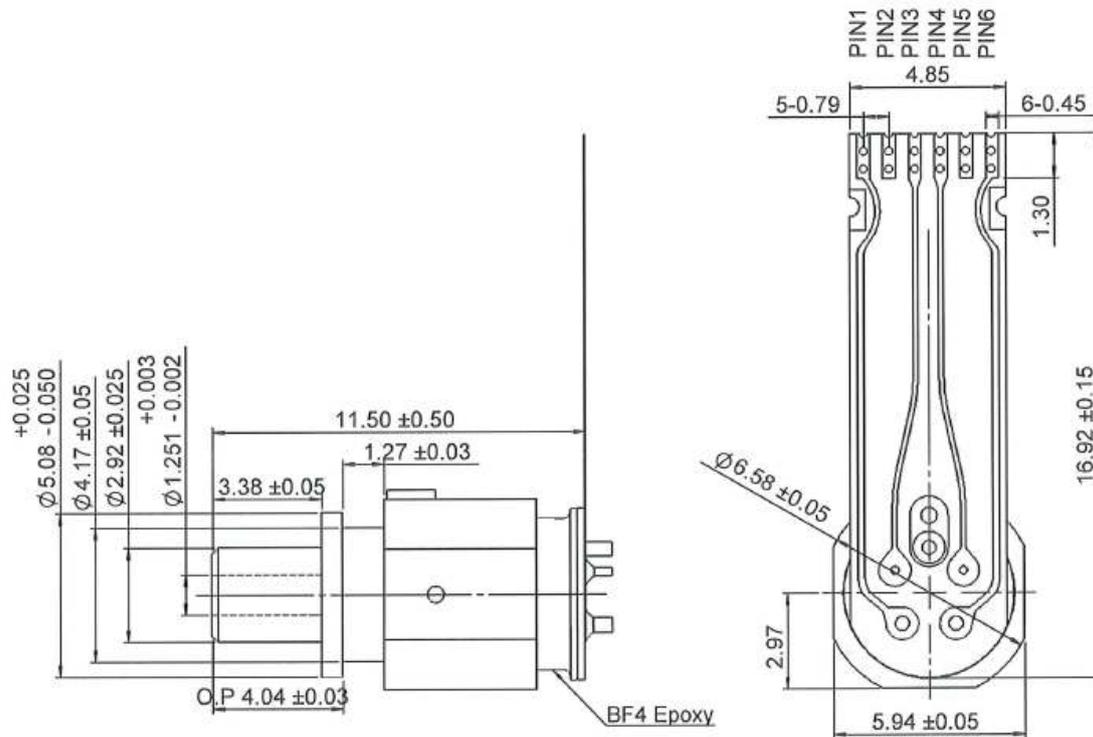
Photodiode Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min	Typ	Max	Test Condition
Monitor Current	$I_{pd}$	mA	0.1	-	0.8	@6.5mA
Dark Current	$I_d$	nA	-	-	30	$V_r = 10 @ 25^\circ C$
PD Capacitance	C	pF	-	20	-	$V_r = 3V @ 1MHz$

## WG5H-902R-HI0 (LC-TOSA)

**Dimensions:** (mm)

*All dimensions are nominal*



### PINOUT

WG5H-902R-HI0	
Number	Function
1	PD Anode
2	GND
3	VCSEL Cathode
4	VCSEL Anode
5	GND
6	PD Cathode

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### Notice

Version	Date	Status	Description	Signature
1.0	2014/07/24	Initial	WG5H-902R-H10 Spec.	Morris

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Version 1.0