

PULSEJACK™

2XN RJ45 Connector



Description:

10/100 Base-TX RJ45 2XN Tab-UP with or without LEDs 8-pin (J2 series) integrated magnetics connector (ICM), designed to support applications, such as Hub and Switches.



Features and Benefits:

- 2XN RJ45 with internal magnetics
- Available with or without LEDs
- Suitable for CAT 5 & 6 Fast Ethernet Cable or better UTP
- Internal magnetics are 100% electrically tested for HI-POT and functionality

Electrical Performance Summary:

- Internal magnetics options available
- Meets or exceeds IEEE 802.3 standard for 100Base-T
- 350 μ H minimum OCL with 8 mA bias current
- High performance for maximum EMI suppression
- Minimum 1500 Vrms isolation per IEEE 802.3 requirement

Electrical Specifications @ 25°C — Operating Temperature 0°C to +70°C

Part Number	No. of Ports	Turns ^{1,2} Ratios		LEDs ³	Insertion Loss (dB TYP)	Return Loss (dB TYP) 100 Ω $\pm$ 15 Ω					Crosstalk (dB TYP)			Common Mode Rejection (dB TYP)	
		TX	RX			1-65 MHz	1-10 MHz	10-30 MHz	30-60 MHz	60-80 MHz	1-30 MHz	30-60 MHz	60-100 MHz	1-50 MHz	50-150 MHz
J2039H3 (A,B,C)	8,12,16	1CT:1CT	1CT:1CT	N/A	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J2042H3 (A,B,C)	8,12,16	1CT:1CT	1CT:1CT	N/A	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J2045H3 (A,B,C)	8,12,16	1CT:1CT	1CT:1CT	N/A	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J2045J329E	4	1CT:1CT	1CT:1CT	G Y	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J2045J349E	8	1CT:1CT	1CT:1CT	G Y	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J2045J369E	12	1CT:1CT	1CT:1CT	G Y	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20
J2045J389E	16	1CT:1CT	1CT:1CT	G Y	-1	-20	-16	-12	-12	-12	-40	-35	-30	-30	-20

Notes:

- Part numbers code (A,B,C, D): A = 2x4, B = 2x6, C = 2x8, D = 2x2
- Both transmit and receive channels meet IEEE 802.3 specifications.
- Different electrical specifications can be accommodated.
- Bi-color LEDs Left/Right: G = green; Y = yellow; N/A = none

RJ45 Durability Testing Rating

Part Number	Mating Force (MAX)	Unmating Force (MAX)	Durability	Plug to Jack Retention (MIN)
J2 Series	5 lbs./2.268 kgs.	5 lbs./2.268 kgs.	750 Insertions	20 lbs./9.072 kgs.

RJ45 Material Specification

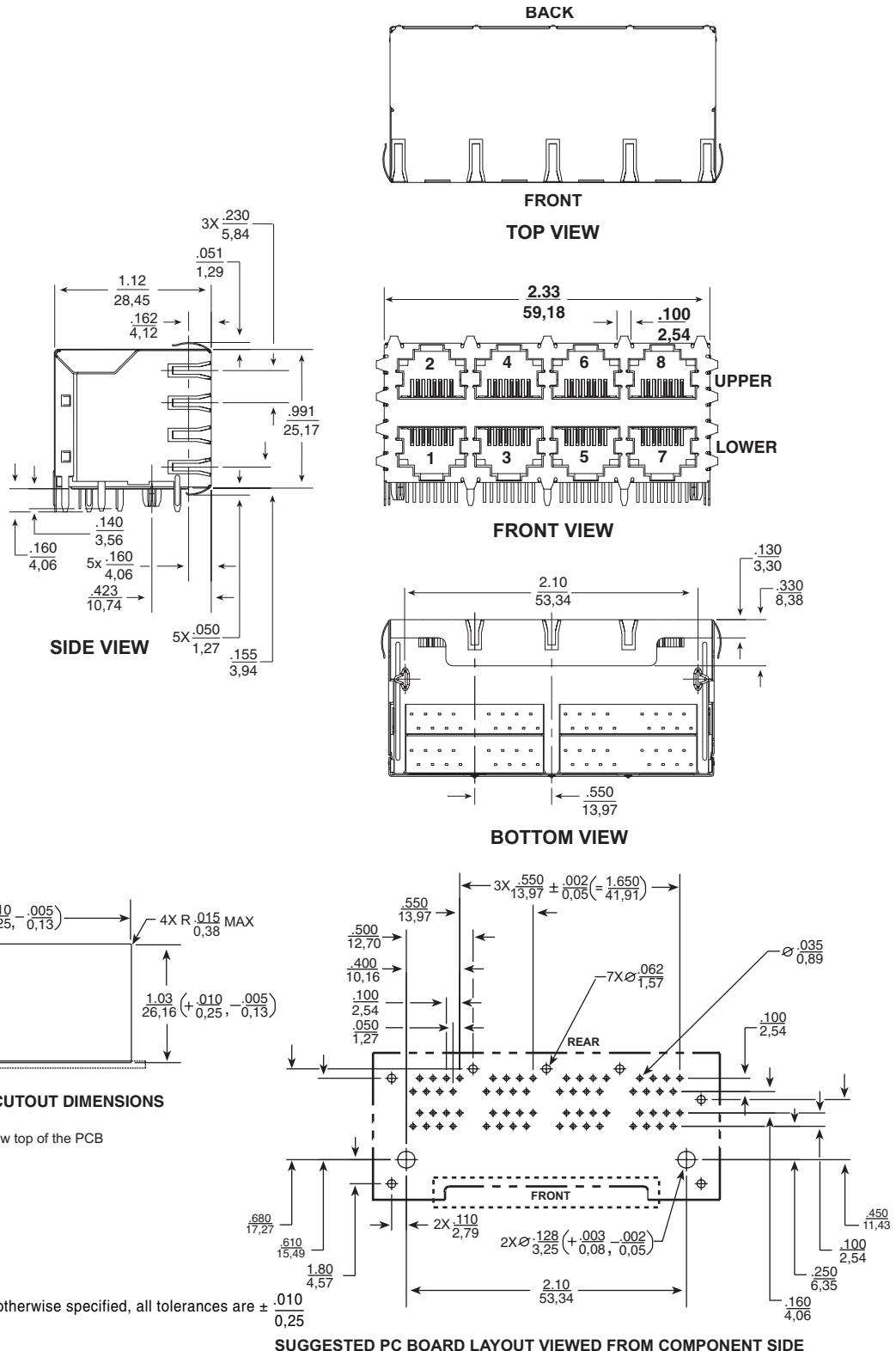
Part Number	Shield		Contact			Housing	
	Material	Finish	Material	Plating Area	Solder Area	Material	Specification
J2 Series	Brass	10-20m inches Nickel over 10-20m inches Nickel	Phosphor Bronze	Nickel underplating and selective gold plating 30 μ inches	120 μ inches Sn90/Pb10 over 50 μ inches nickel	Thermoplastic	UL 94 V-0

Notes:

- All connector part numbers starting with the series prefix J2 comply to the above limits.
- Connector dimensions comply with FCC dimension requirements.

J2 Series (No LEDs) Mechanicals

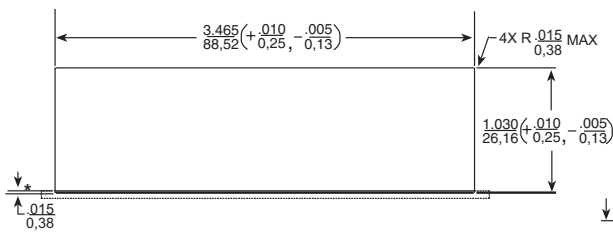
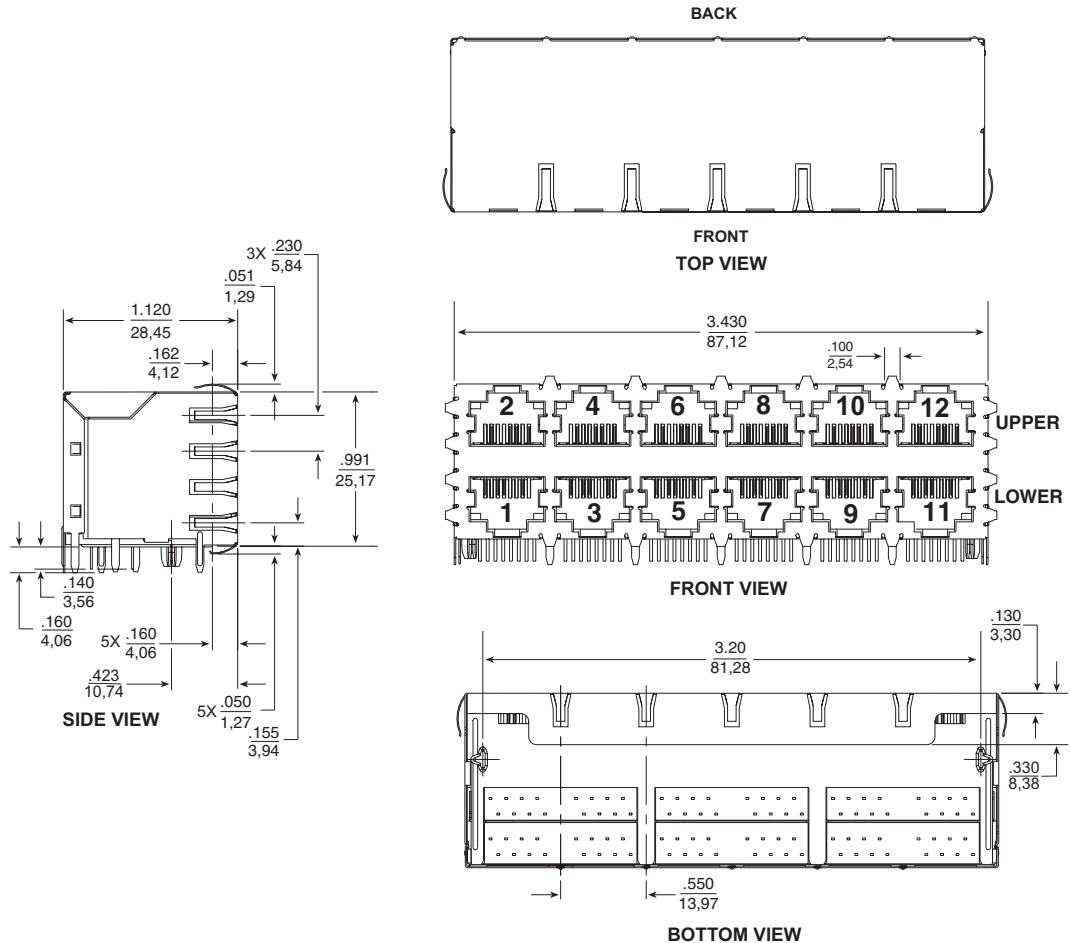
2 X 4



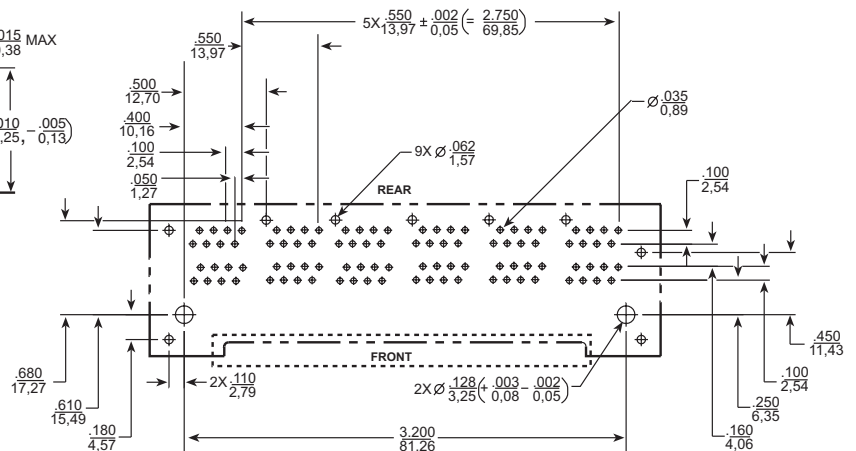
Dimensions: $\frac{\text{Inches}}{\text{mm}}$ Unless otherwise specified, all tolerances are $\pm \frac{.010}{0.25}$

J2 Series (No LEDs) Mechanicals

2 X 6



*This cutout below top of the PCB

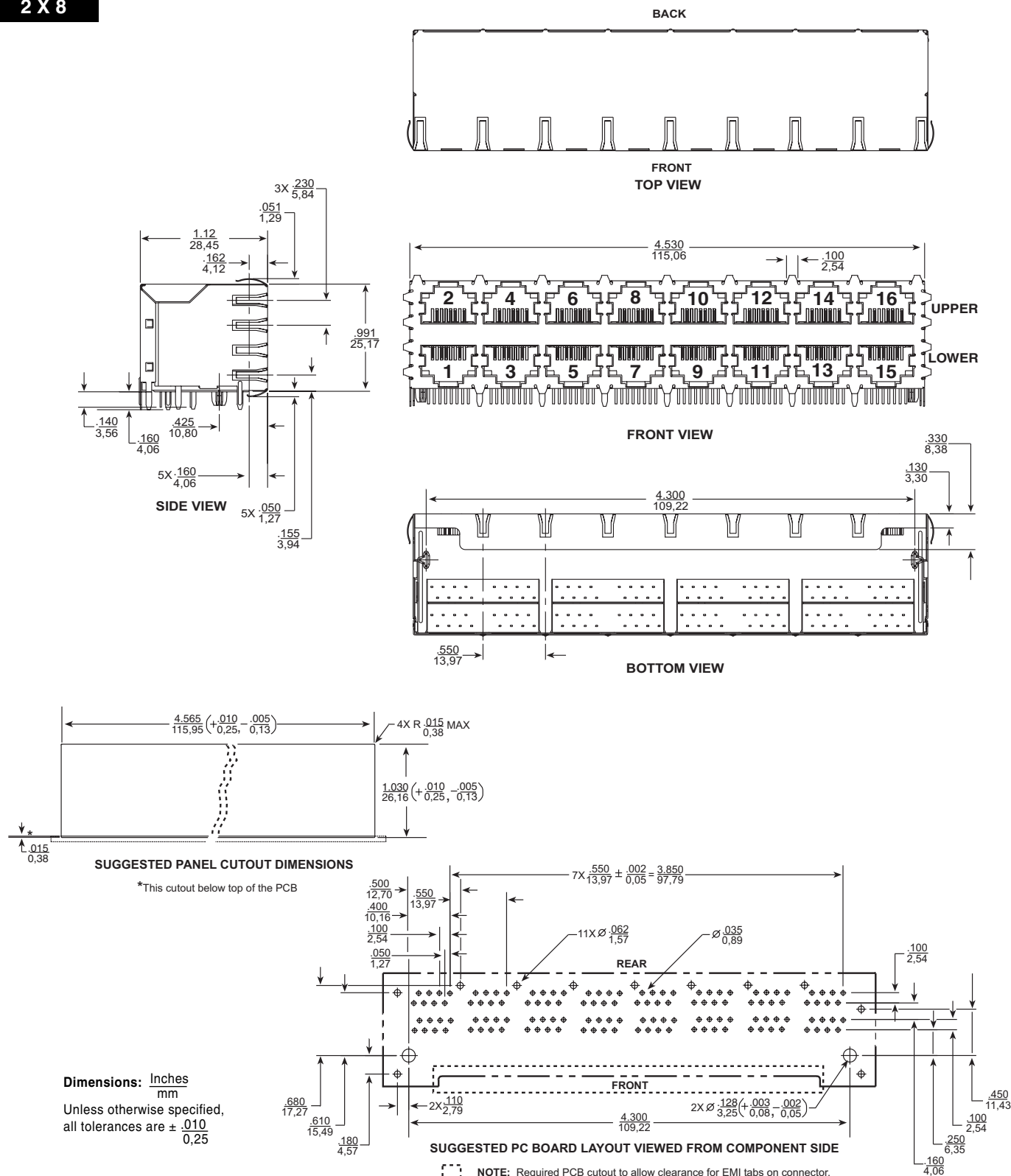


Dimensions: $\frac{\text{Inches}}{\text{mm}}$ Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

NOTE: Required PCB cutout to allow clearance for EMI tabs on connector.

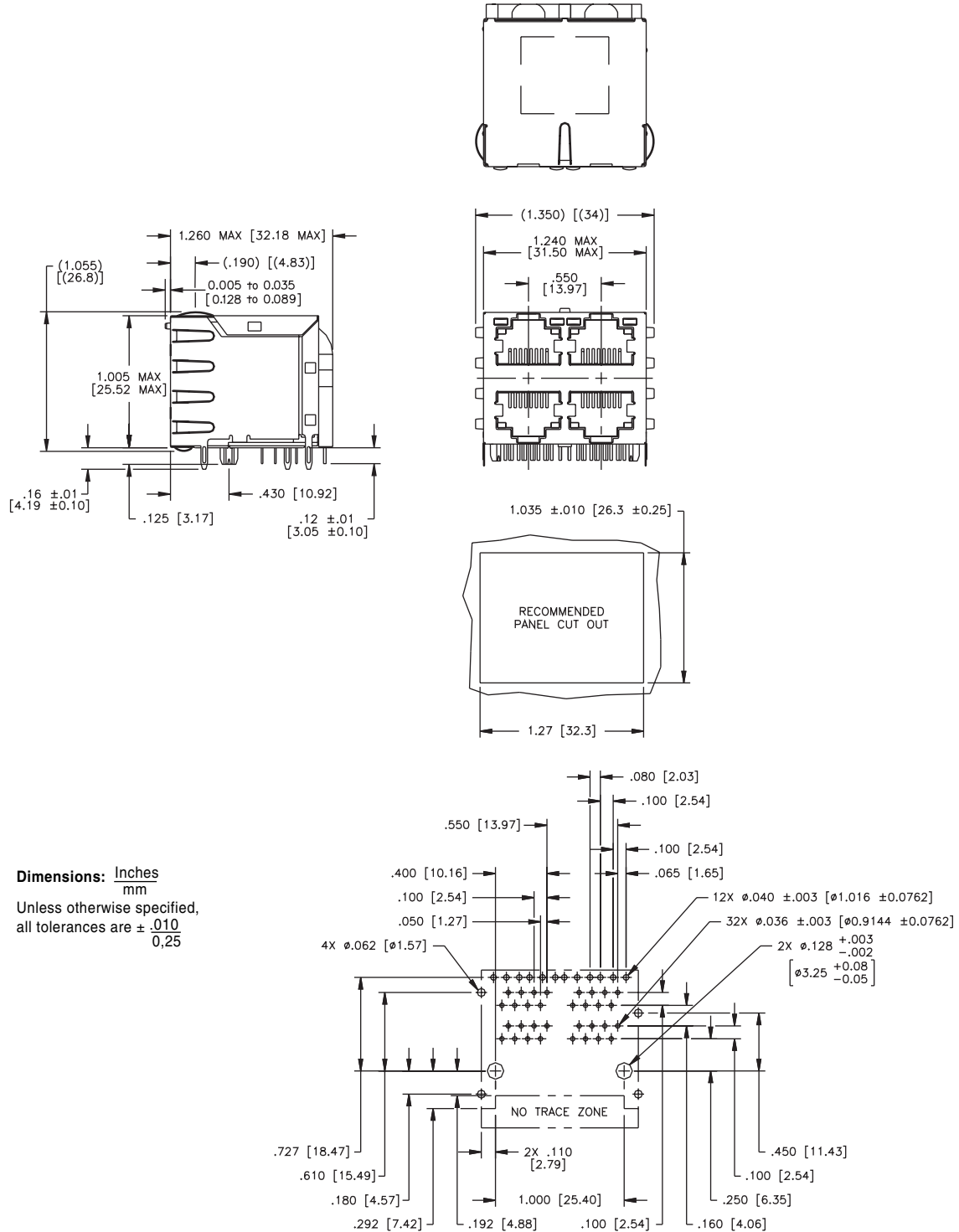
J2 Series (No LEDs) Mechanicals

2 X 8



J2 Series (With LEDs) Mechanicals

2 X 2



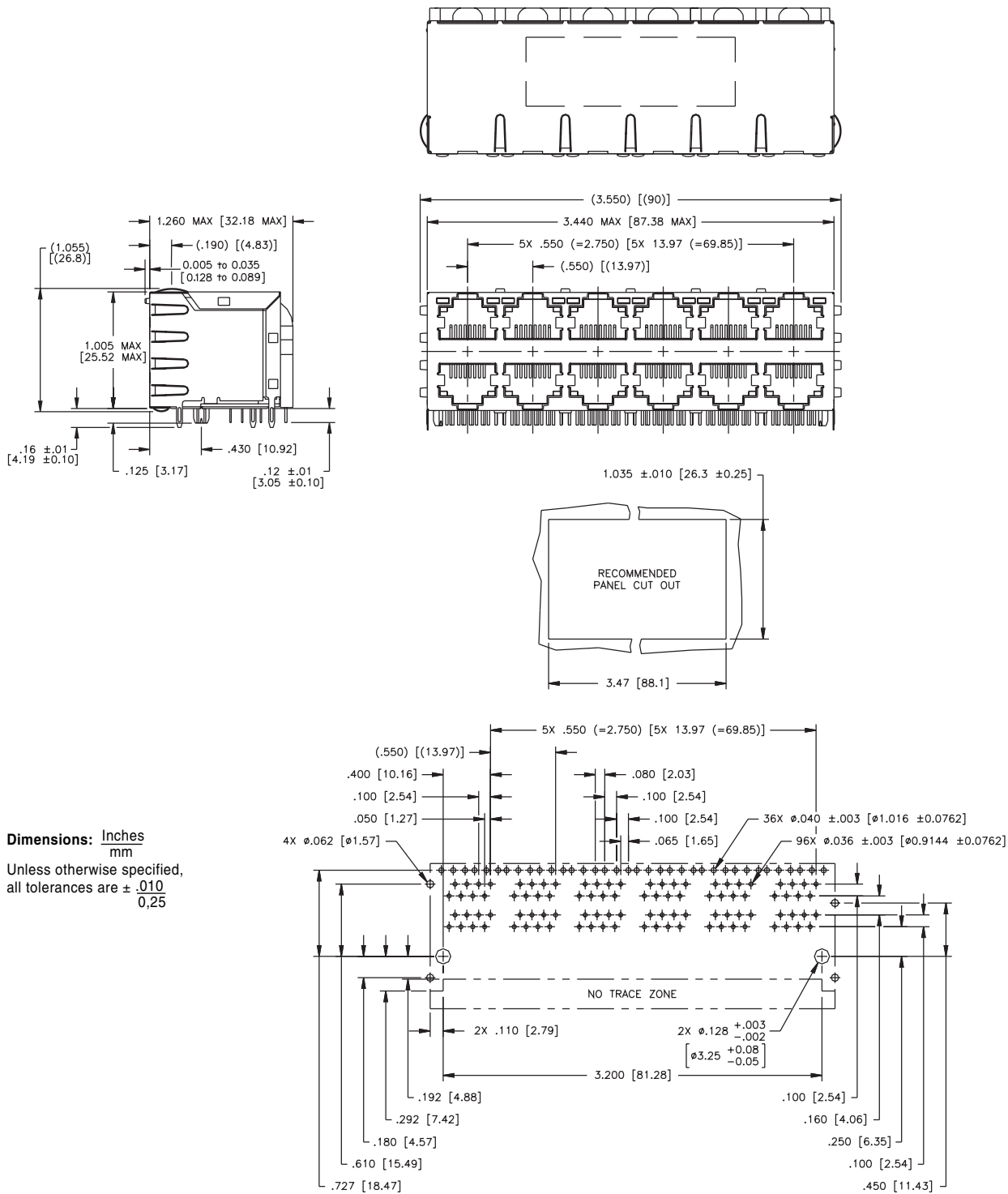
2 X 4



 **NOTE:** Required PCB cutout to allow clearance for EMI tabs on connector.

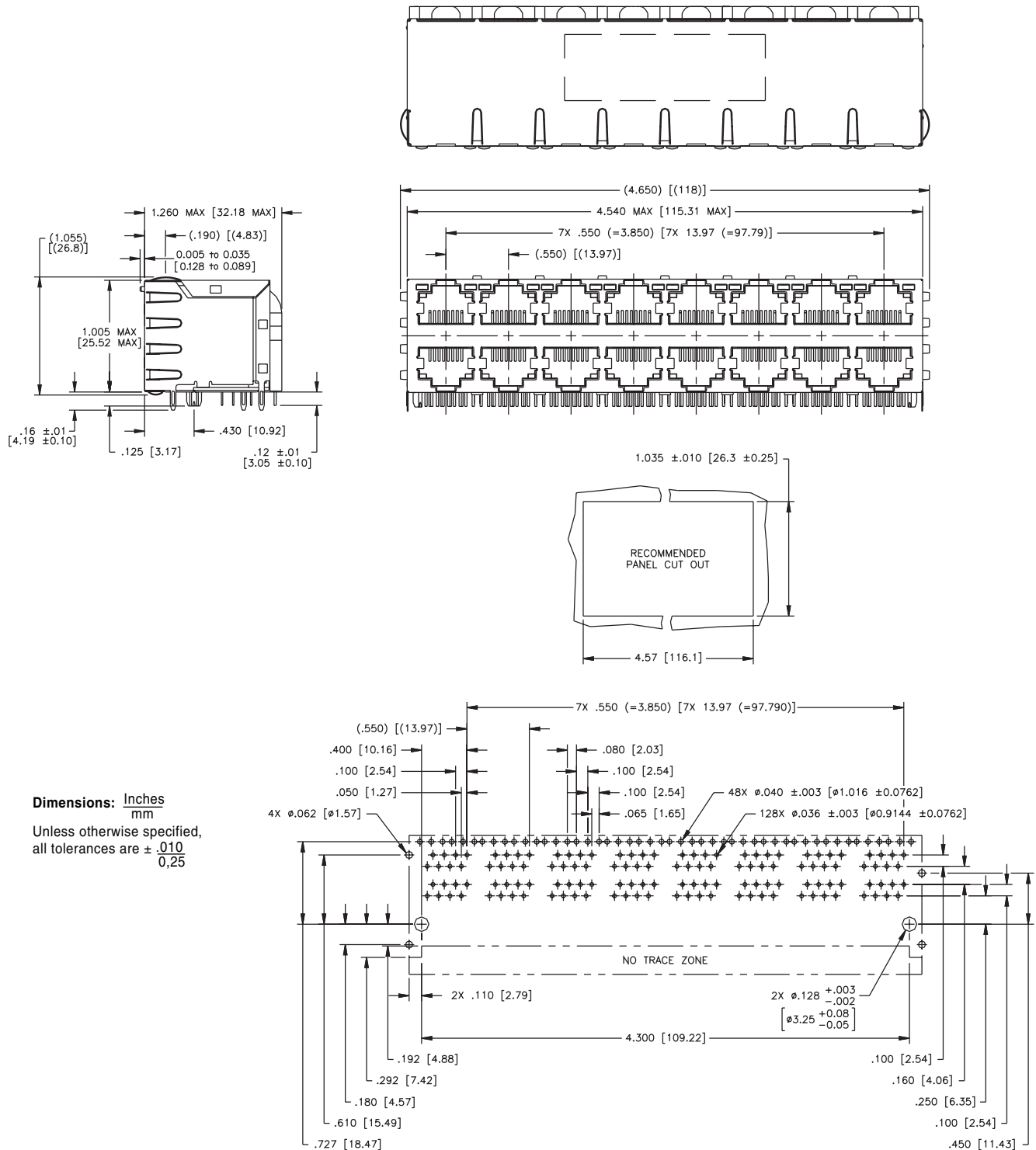
J2 Series (With LEDs) Mechanicals

2 X 6



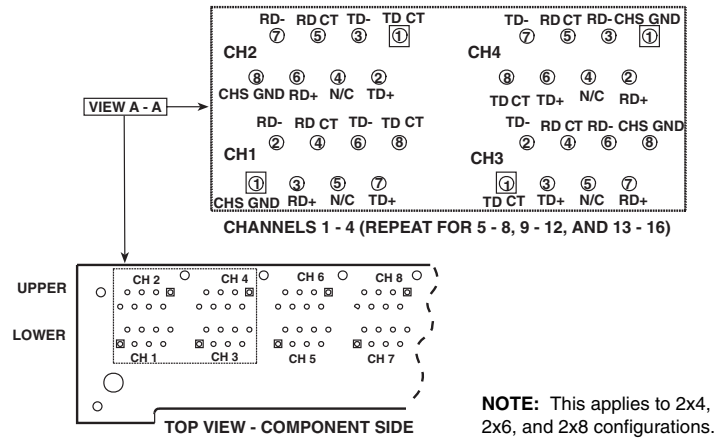
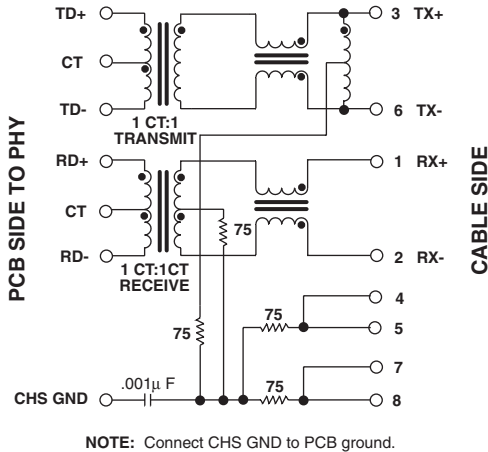
J2 Series (With LEDs) Mechanicals

2 X 8

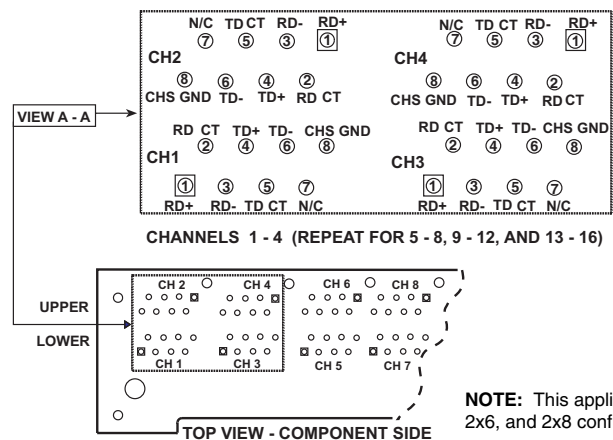
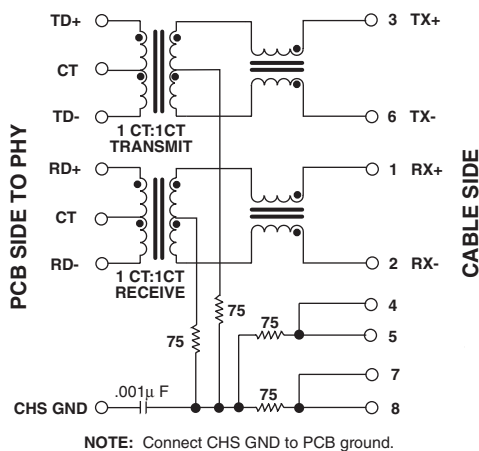


J2 Series (No LEDs) Schematics

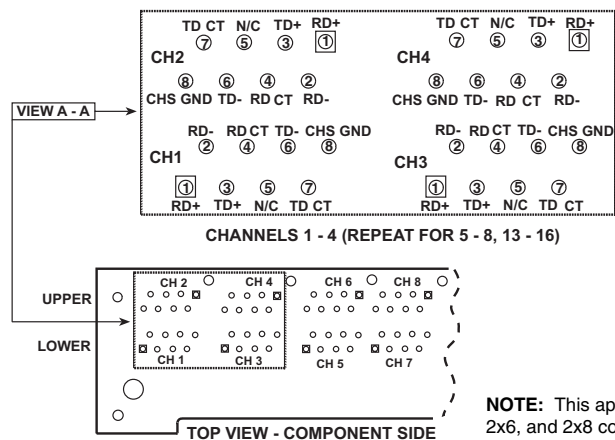
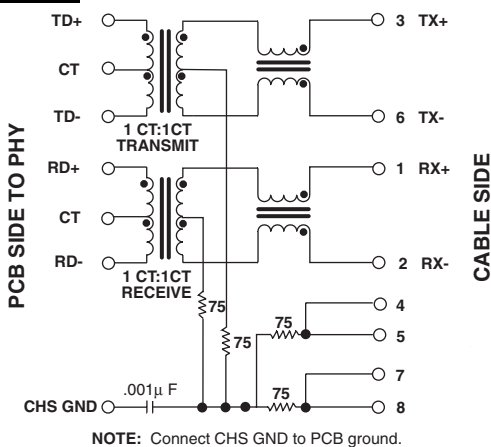
J2039



J2042

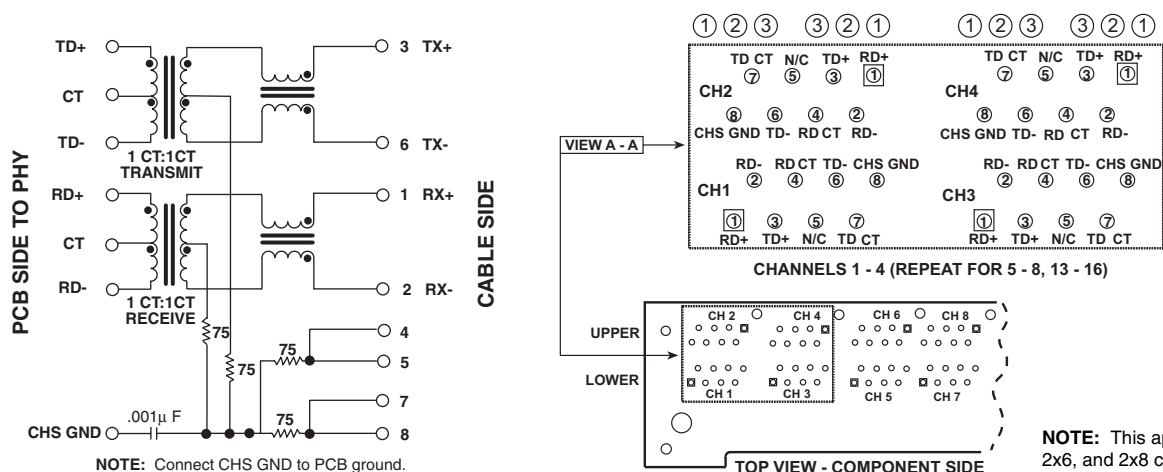


J2045

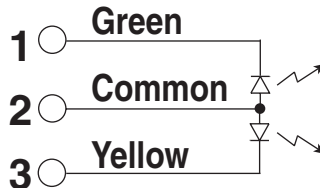


J2 Series (With LEDs) Schematics

J2045



LED Configuration



Standard LED Color	LED Wavelength ¹	Forward ² (V MAX)	Typical (V TYP)
Green	560 - 570 nm	2.5	2.1 - 2.2
Yellow	588 - 610 nm	2.5	2.1 - 2.2

1. LED intensity/wavelength measured with Photo Research PR-650 Colorimeter
2. With a forward current of 20 mA

For More Information :

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