

# InnoLight BE5001

# 10 Gb/s BERT

#### <u>Features</u>

Multiple Data Rates at 10G: OC192/10GbE/FEC/WAN Dual channel electrical and optical Interfaces PRBS and User Pattern Small Package Ultra Low Power Consumption Low Cost Solution for Production Testing Controlled by User Software on External PC Connected by USB Interface Free Labview Driver

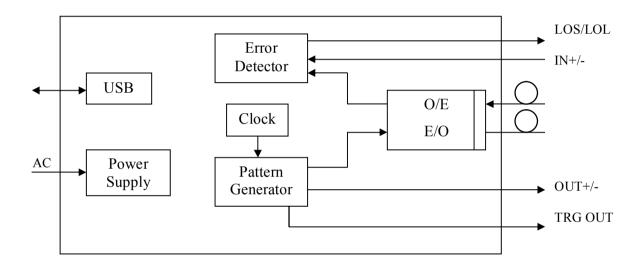


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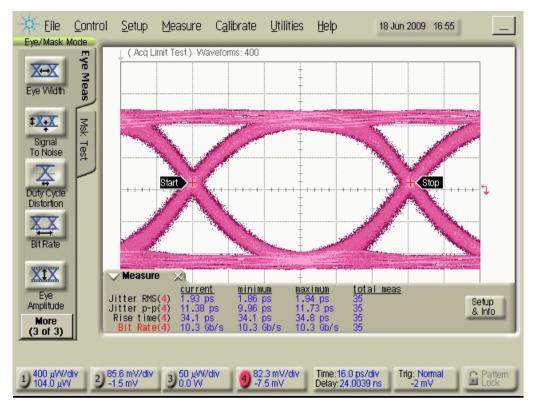
InnoLight Technology is an established global technology company that provides test solutions for communications industry. With our unique insight and background within telecom and datacom industry .we deliver low cost, high performance test instruments and automatic test sets for high-speed communications components design and manufacturing. InnoLight BE5001 10G BERT is a high performance, low cost equipment suitable for transceiver and TOSA/ROSA production testing.

#### **Functional Block Diagram**





# <u>Eye Diagram</u>



\* Measured at PRBS 2<sup>7</sup>-1, 10.3125 Gb/s.

### **System Specification**

#### Data rate

The same data rate applies for pattern generator electrical out and optical out, and for error detector electrical in and optical in.

| OC192              | 9.95328 Gb/s                 |
|--------------------|------------------------------|
| 10GBE LAN          | 10.3125 Gb/s                 |
| OC192 with FEC     | 10.709225 Gb/s               |
| 10GBE LAN with FEC | 11.095727 Gb/s               |
| Accuracy           | $\pm$ 50 ppm                 |
| Any-rate           | 9.95Gb/s~11.4Gb/s (optional) |

#### **Operating system**

The GUI software supplied runs on Windows 2000 or XP by a USB interface.



#### **Pattern Generator**

| Pattern                        | PRBS7, PRBS31, 64bit user pattern              |
|--------------------------------|--|
| Polarity                       | Inverted or non-inverted                       |
| Electrical interface           | SMA differential 100 above AC accorded         |
| Electrical interface           | SMA, differential, 100ohm, AC coupled          |
| Output swing                   | 380mV ~ 770mVpp Typical                        |
| Jitter (rms)                   | 2 ps Typical (20%-80%)                         |
| Jitter (peak to peak)          | 13 ps Typical (20%-80%)                        |
| Rise/Fall Time                 | 34 ps Typical                                  |
| Optical interface              | Support 850nm, 1310nm, 1550nm                  |
| External reference clock Input | 1/64 clock (optional) to support any-rate from |
|                                | 9.95Gb/s-11.4Gb/s                              |
| Trigger Output                 | 1/64 clock                                     |

#### **Error Detector**

| Pattern              | PRBS7, PRBS31, 64 bit user pattern    |
|----------------------|---------------------------------------|
| Polarity             | Inverted or non-inverted              |
| Electrical interface | SMA, differential, 100ohm, AC coupled |
| Input sensitivity    | 8mV~1000mVpp                          |
| Optical interface    | Support 850nm, 1310nm, 1550nm         |
| Clocking mode        | Integrated CDR                        |

#### <u>General</u>

Power Supply

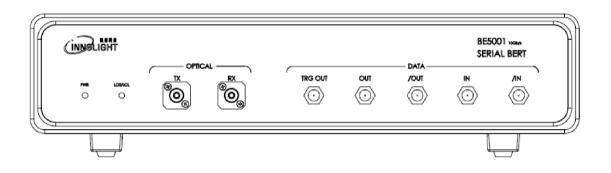
Power consumption Operating temperature AC input 220 V ± 10% AC input 85-265 V (optional) 5W Max 0°C to 55°C



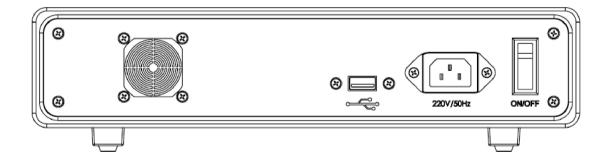
# <u>Outline</u>

| Length: | 380mm |
|---------|-------|
| Width:  | 300mm |
| Height: | 80mm  |

#### **Front Panel**



#### **Rear Panel**

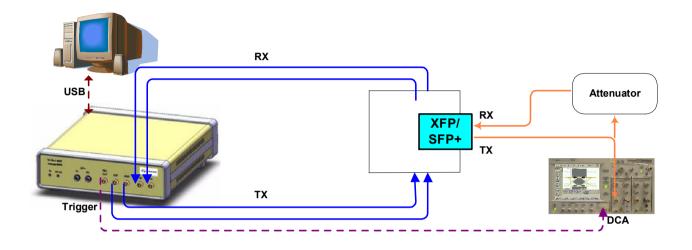


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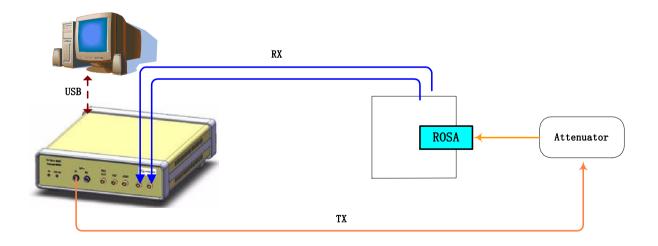


# **Application**

#### 10G XFP/SFP+ Test Diagram



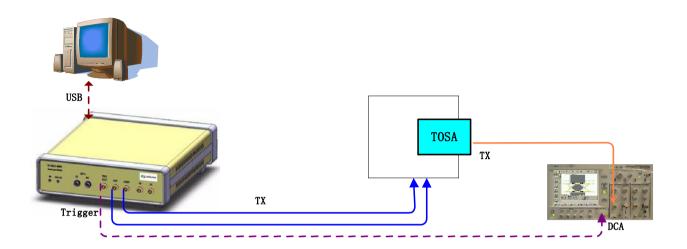
10G ROSA Sensitivity Test Diagram



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#### 10G TOSA High Speed Performance Test Diagram



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|----------------------------|---|
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