

## DBR Fiber-Pigtailed Laser with built in isolator

DBR785S



S/N: DBR-31995

Wavelength: 784.7nm

Fiber Type: 780HP

Test Date: 8/28/2018



Package:785-2-2-B-S-A

Connector: FC/APC

Tested By: Paya



QA: Pass

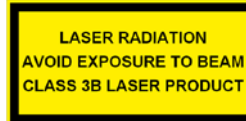
### Summary of Test Data ( CW )

| Parameter                             | Symbol                   | Value  | Unit  |
|---------------------------------------|--------------------------|--------|-------|
| Operating Current                     | $I_{op}$                 | 250.0  | mA    |
| Operating Temperature                 | $T_{op}$                 | 25.0   | °C    |
| Fiber Output Power @ $I_{op}, T_{op}$ | $P_{out}$                | 27.2   | mW    |
| Voltage @ $I_{op}, T_{op}$            | $V_F$                    | 1.91   | V     |
| Monitor Current @ $I_{op}, T_{op}$    | $I_{mon}$                | 0.654  | mA    |
| SMSR @ $I_{op}, T_{op}$               | SMSR                     | 58.3   | dB    |
| Threshold Current @ $T_{op}$          | $I_{th}$                 | 90.5   | mA    |
| Slope Efficiency @ $T_{op}$           | $\Delta P/\Delta I$      | 0.16   | W/A   |
| Current Tuning                        | $\Delta\lambda/\Delta I$ | 0.0015 | nm/mA |
| Temperature Tuning                    | $\Delta\lambda/\Delta T$ | 0.061  | nm/°C |

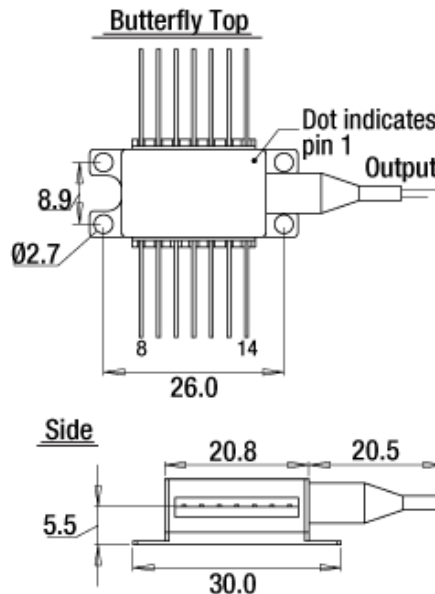
### Absolute Maximum Ratings

| Parameter             | Ratings | Unit |
|-----------------------|---------|------|
| Laser Diode Current*  | 270     | mA   |
| Optical Output Power* | 50      | mW   |
| LD Reverse Voltage*   | 2       | V    |
| Storage Temperature   | -10~+65 | °C   |
| Case Temperature      | 0~+50   | °C   |

\* CW,  $T_{case}=25^{\circ}C$



CAUTION- use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. There are no user serviceable parts in this product. When proper power is applied to this product, Laser radiation will be emitted from the optical fiber.



| PIN IDENTIFICATION |                 |
|--------------------|-----------------|
| 1. TEC +           | 14. TEC -       |
| 2. Thermistor      | 13. Case        |
| 3. PD Anode        | 12. NC          |
| 4. PD Cathode      | 11. Dev Cathode |
| 5. Thermistor      | 10. Dev Anode   |
| 6. NC              | 9. NC           |
| 7. NC              | 8. NC           |

### Important Notes:

- The maximum ratings mean the limitation over which the laser should not be operated even instant time.
- Do not clean the fiber connector when the diode is in operation. The laser should be off when plugging or un-plugging the connector.
- To protect the laser diode from damage due to static electricity (ESD), please follow proper ESD handling precautions.
- Do not pull or fold the fiber. The fiber is very fragile and easily broken. Avoid handling the fiber by the rubber "boots" of the black housing and connector ends of the pigtail.
- To ensure safe operation use only with a suitable power source that complies with the pertinent requirements for laser systems as specified in IEC-60825-1 "Safety of Laser Products."



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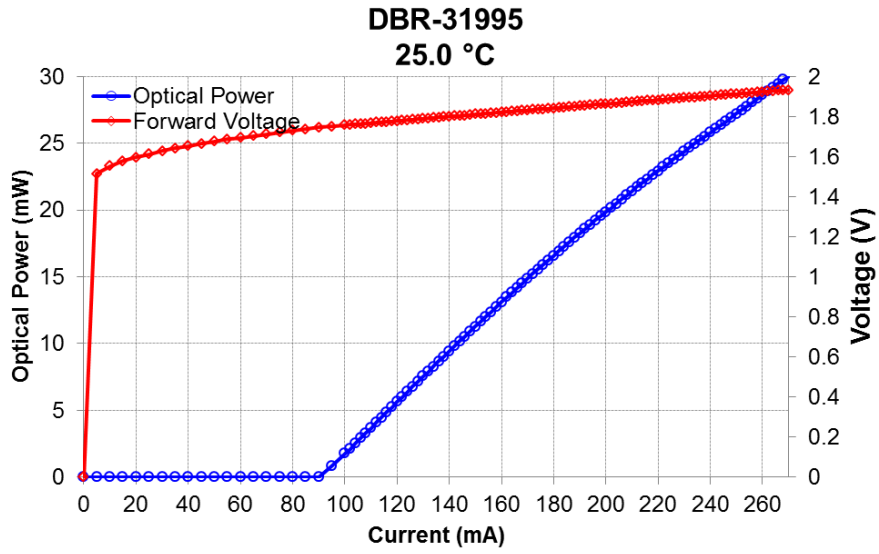


Figure 1: Output Power and Operating Voltage versus Bias Current

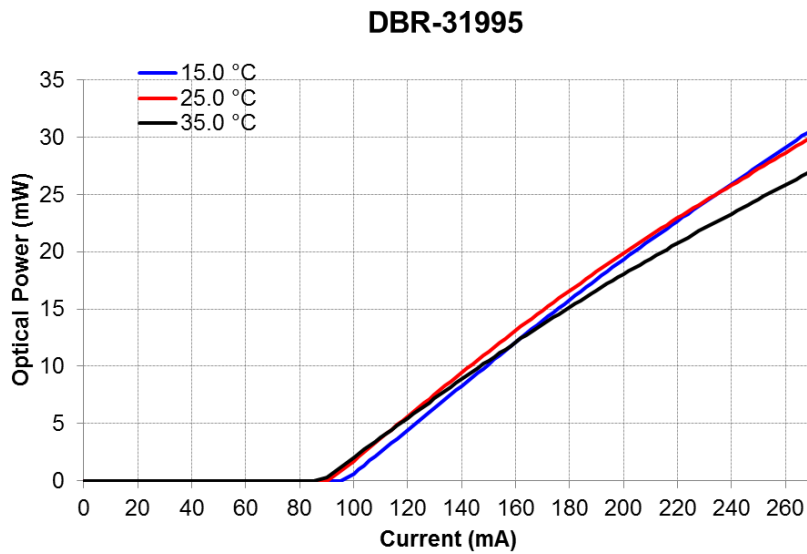


Figure 2: Output Power versus Bias Current

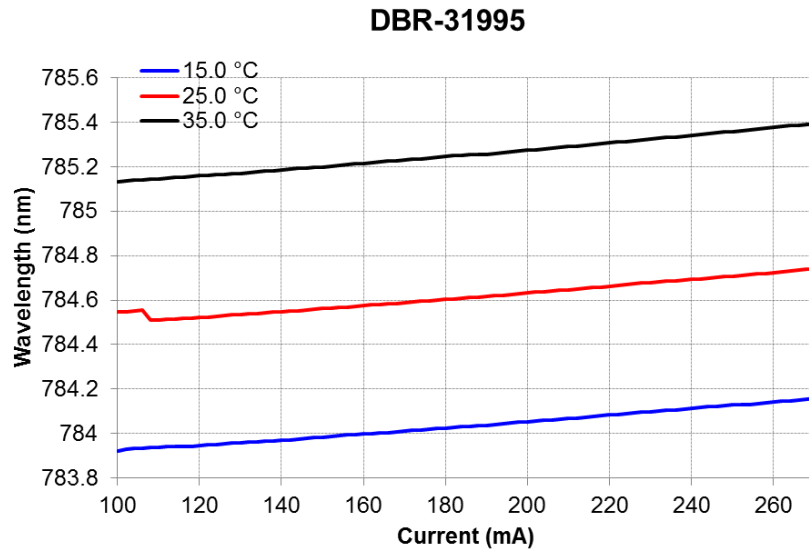


Figure 3: Wavelength versus Bias Current

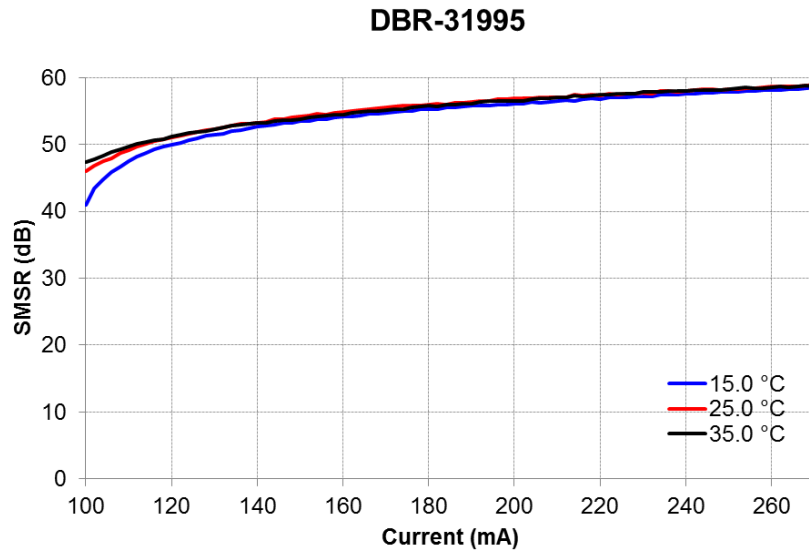


Figure 4: Side Mode Suppression Ratio (SMSR) versus Bias Current

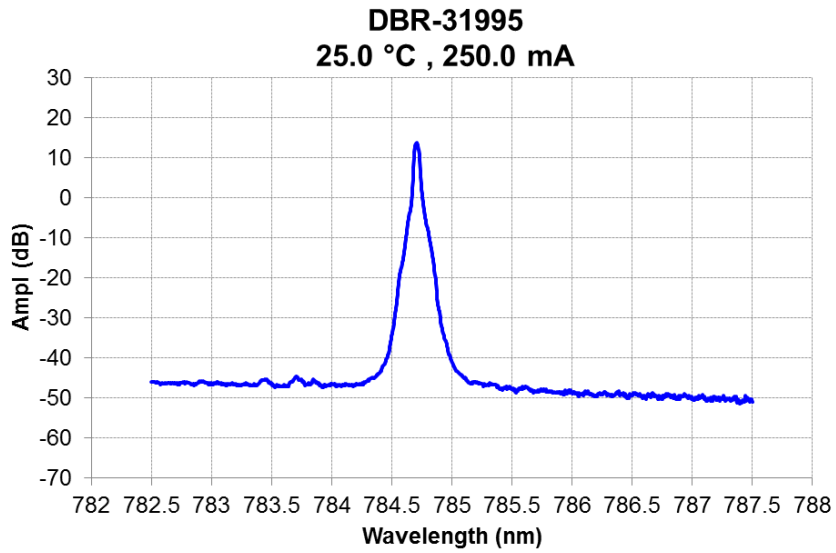


Figure 5: Optical Spectrum (RBW=0.02nm)

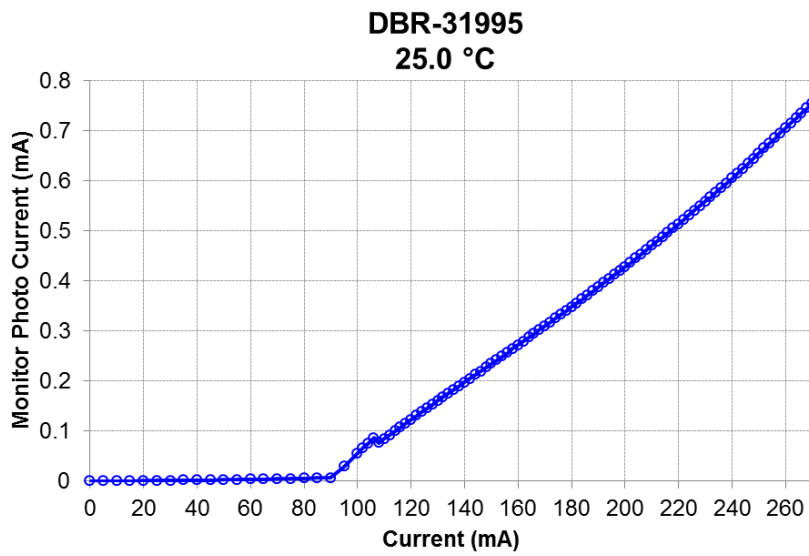


Figure 6: Monitor Photodiode Current versus Bias Current