

## 1540nm PM Bandpass Filter for Pulse Power

### FEATURES

- High Isolation
- Low Insertion Loss
- High Reliability and Stability
- Various Bandwidth
- High Optical Power

### APPLICATIONS

- Broadband Systems
- Optical Amplifying Systems
- Telecommunication Networks
- Laser Systems
- Research Labs



### SPECIFICATIONS

| Parameters                               |                            | Unit | Standard                                                                                                                  | High ER Type |
|------------------------------------------|----------------------------|------|---------------------------------------------------------------------------------------------------------------------------|--------------|
| Center Wavelength                        |                            | nm   | 1540                                                                                                                      |              |
| Min. Pass Band Width @ 0.5dB             |                            | nm   | 0.12, 0.3, 0.7, 2.5, 5.0, 7.0, 10.0, 15.0                                                                                 |              |
| Insertion Loss over Pass Band Wavelength |                            | dB   | ≤1.0                                                                                                                      | ≤1.2         |
| Stop Wavelength (ASE)                    | 0.12nm Bandwidth           | nm   | 1510~1539.4 & 1540.6~1600                                                                                                 |              |
|                                          | 0.3nm Bandwidth            | nm   | 1510~1539 & 1541~1600                                                                                                     |              |
|                                          | 0.7nm Bandwidth            | nm   | 1510~1538.5 & 1541.5~1600                                                                                                 |              |
|                                          | 2.5nm Bandwidth            | nm   | 1510~1537 & 1543~1600                                                                                                     |              |
|                                          | 5nm Bandwidth              | nm   | 1510~1535 & 1545~1600                                                                                                     |              |
|                                          | 7nm Bandwidth              | nm   | 1510~1533 & 1547~1600                                                                                                     |              |
|                                          | 10nm Bandwidth             | nm   | 1510~1530 & 1550~1600                                                                                                     |              |
|                                          | 15nm Bandwidth             | nm   | 1510~1527 & 1553~1600                                                                                                     |              |
| Stop Wavelength (ASE)                    | Standard                   | dB   | ≥25                                                                                                                       |              |
| Isolation                                | High Isolation             | dB   | ≥45                                                                                                                       |              |
| ASE Direction                            |                            | -    | F: Forward, B: Backward, T: Two-way                                                                                       |              |
| Configuration                            |                            | -    | D: 2-port, Y: 3-port, X: 4-port                                                                                           |              |
| Optical Return Loss                      |                            | dB   | ≥50                                                                                                                       |              |
| Extinction Ratio                         |                            | dB   | ≥18                                                                                                                       | ≥20          |
| Fiber Type                               | Input&Output               | -    | PM1550 Panda Fiber or 10/125um PMDC Fiber NA=0.08 (O)                                                                     |              |
|                                          |                            |      | 10/130um PMDC Fiber NA=0.15 (O2) or 12/130um PMDC Fiber (T)                                                               |              |
|                                          |                            |      | 25/250um PMDC Fiber (R) or 25/300um PMDC Fiber (G)                                                                        |              |
| ASE Guide Out (Y/X Type)                 |                            | -    | Same Fiber, Corr. SM Fiber or MM Fiber                                                                                    |              |
| Fiber Tensile Load                       |                            | N    | 5                                                                                                                         |              |
| Max. Average Optical Power (ASE+Signal)  |                            | W    | 0.3, 0.5, 1, 2, 3, 5, 10, 15, 20, 30, 50, 60, 80, 100                                                                     |              |
| Max. Peak Power for pulse                |                            | kW   | 0.1, 1, 2, 3, 5, 10, 15, 20                                                                                               |              |
| Max. ASE Average Power                   |                            | W    | 0.3, 0.5, 1, 2, 3, 4, 5, 10                                                                                               |              |
| Operating Temperature                    |                            | °C   | 0~70                                                                                                                      |              |
| Storage Temperature                      |                            | °C   | -40~85                                                                                                                    |              |
| Package Dimension                        | Stainless Steel Tube (SST) | mm   | ø5.5x <sup>L</sup> 35 (≤5W); ø6.0x <sup>L</sup> 50 (5~10W)                                                                |              |
|                                          | Metal Box                  | mm   | H: <sup>L</sup> 90x <sup>W</sup> 12x <sup>H</sup> 10 (>10W); M: <sup>L</sup> 120x <sup>W</sup> 12x <sup>H</sup> 10 (≤10W) |              |

- Note:**
- Specifications are for device without connectors; Specifications may change without notice.
  - To add connectors, IL is 0.3dB higher, RL is 5dB lower, ER is 2dB Lower, Connector key is aligned to slow axis.
  - High ER type can only work in slow axis; Suggest to use Y/X type or H Box if blocked optical power is ≥1W.
  - Only guarantee 1W continuous wave (CW) power thru testing for connectors added.
  - Devices for higher optical power or with other type fiber or consigned fiber are also available; Devices can only work in the core of Double Cladding (DC) Fiber, Cladding Power must be stripped before connecting the device.
  - Package size may be different for different optical power and configurations.

### ORDERING INFORMATION (PN)

| FPBP-1540-NN(C)(C)(C) - (C) (C) -H NN P NN -(NN) - (C) C C NN -CC/CCC |           |                   |                  |                          |                   |               |            |                 |               |                     |               |              |                         |
|-----------------------------------------------------------------------|-----------|-------------------|------------------|--------------------------|-------------------|---------------|------------|-----------------|---------------|---------------------|---------------|--------------|-------------------------|
| Bandwidth                                                             | Type      | ASE Type          | ASE Iso          | Fwd ASE Fiber            | Bwd ASE Fiber     | Average Power | Peak Power | ASE Power       | Package       | Fiber Type          | Fiber Sleeve  | Fiber Length | Connector Type          |
| 03~0.3nm                                                              | R=High ER | B=Backward        | I=High           | Y=Same Fiber             | Y=Same Fiber      | 03~300mW      | 01~100W    | 1~1W            | M=Metal Box   | 2=PM1550Fiber       | B= Bare fiber | 05~0.5m      | N=Without Connector     |
| 50~5nm                                                                | Blank for | T=Two-way         | Isolation        | S=Corr. SM Fiber         | S=Corr. SM Fiber  | 1~1W          | 1~1kW      | 5~5W            | H=H Box       | 0=10/125 PMDC Fiber | L= Loose Tube | 10~1.0m      | FC/APC=FC/APC Connector |
| 100~10nm                                                              | Standard  | Blank for Forward | Blank for        | N=None                   | A=105/125um Fiber | 5~5W          | 10~10kW    | 10~10W          | Blank for SST | T=12/130 PMDC Fiber | 2= 2mm Cable  | 15~1.5m      | LC/PC=LC/PC Connector   |
| 150~15nm                                                              |           | Standard          | Blank for D Type | Blank for None or D Type |                   | 20~20W        | 20~20kW    | Blank for 300mW |               | G=25/300 PMDC Fiber | 3= 3mm Cable  | 20~2.0m      | SC/UPC=SC/UPC Connector |