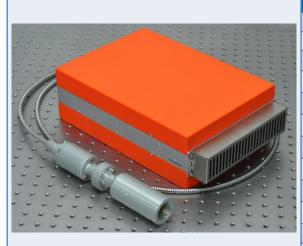


# IFL-20P-HM 20W Multi-Mode Pulse Fiber Laser

**IFL-2OP-HM** (H-series) is our Multi-Mode series Pulse Fiber Laser. It is designed with integrated cooling and iLuma's unique SRS suppression technology. The HM series pulse laser provides the user the ability to select pulse durations from 10ns to 350ns and has been designed to give optimal peak power and pulse energy over this range. Besides providing higher output pulse energies, the HM series stands out from the other series because instead of providing our users with a sharp Gaussian beam profile for marking, it is designed to provide quality and stable broader beam profiles for unique applications such as deep engraving and surface coating removal.

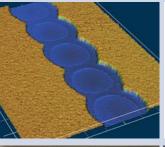


#### Features:

- Integrated built-in heatsink and cooling fan
- ✓ Peak power to 25KW
- ✓ Rep Rate from 20KHz\* to 1000 KHz
- ✓ Pulse Duration from 10ns to 350ns
- ✓ Beam Quality M2 ≤ 4
- ✓ Pulse Duration Tunable
- ✓ Rising time of first pulse tunable
- ✓ 2year warrantee
- ✓ Peak power cover all the operation rep rate.
- ✓ Integrated Isolator with Beam Delivery Optics
- ✓ SCSI hardwaire and RS-232 software control
- ✓ Real time monitoring & Shutdown Protection

### **Applications:**

- ✓ Metal Marking & Cutting
- ✓ Remote Metal Welding
- ✓ Thin Film Removal
- ✓ Poly-compounds Marking
- ✓ IC Marking
- ✓ Ceramic Scribing and Cutting
- ✓ Mono silicon, Poly silicon Processing
- ✓ Resistor Trimming
- ✓ Solar Cell Scribing
- ✓ ITO Film removal
- ✓ Hole drilling









<sup>\*</sup>Single Shot and pulses on demand available



## **Product Specification:**

| Product Mane           | 20W HM             | 30W HM*            | 40W HM*            |  |  |
|------------------------|--------------------|--------------------|--------------------|--|--|
| Product Code           | IFL-20P-HM-N-1     | IFL-30P-HM-N-1     | IFL-40P-HM-N-1     |  |  |
| Average Power          | 20W                | 30W                | 40W                |  |  |
| Central Wavelength     | 1064 ± 5 nm        | 1065 ± 5 nm        | 1066 ± 5 nm        |  |  |
| Pulse Duration         | 10ns-350ns         | 10ns-350ns         | 10ns-350ns         |  |  |
| Max Peak Power         | 20KW               | 25KW               | 25KW               |  |  |
| Full Power of Rep rate | 20 - 1000kHz       | 25 - 1000kHz       | 30 - 1000kHz       |  |  |
| Output Power Stability | 5%                 | 5%                 | 5%                 |  |  |
| Max Pulse Engergy      | 1mJ                | 1.2mJ              | 1.3mJ              |  |  |
| Beam size              | 5 <b>–</b> 9mm     | 5 – 9mm            | 5 <b>–</b> 9mm     |  |  |
| M <sup>2</sup>         | ≤ 4                | ≤ 4                | ≤ 4                |  |  |
| polarization           | Random             | Random             | Random             |  |  |
| Length of cable        | 2 m                | 2 m                | 2 m                |  |  |
| Weight of Module       | < 6kg              | < 6kg              | < 6kg              |  |  |
| Dimention of Module    | 360 x 210 x 100 mm | 361 x 210 x 100 mm | 362 x 210 x 100 mm |  |  |
| Operation Temp.        | 5°C - +55°C        | 5°C - +55°C        | 5°C - +55°C        |  |  |
| Storage Temp.          | —10°C - + 70°C     | —10°C - + 70°C     | —10°C - + 70°C     |  |  |

<sup>\*</sup> will be launched at the end of year 2014

## **Product Order Code:**

| Co.,<br>Code | -  | Average Power<br>Code | - | Beam Quality<br>Code   | - | Pulse Feature<br>Code     | - | Wavelength<br>Code | - | BET<br>Code    |  |
|--------------|----|-----------------------|---|--|---|---------------------------|---|--------------------|---|----------------|--|
| IFL          | -  | 15P                   | - | SM   | - | N                         | - | 1                  | - | А              |  |
|              | -  | 20P                   | - | LM   | - | S                         | - | 2                  | - | В              |  |
|              | -  | 30P                   | - | HM   | - | Р                         | - | 3                  | - | С              |  |
|              | -  | 40P                   | - |  | - | С                         | - | 4                  | - | D              |  |
|              |    | 500C                  |   |  | - | L                         | - |                    | - | Е              |  |
| Notes        |    | 15P-15W Pulse         |   | SM-Single Mode   |   | N- Pulse, 4ns-350ns,      |   | 1-1060nm           |   | A- Without BET |  |
|              |    | 20P-20W Pulse         |   | LM-Low Mode  |   | S-Short Pulse, 1.5ns-10ns |   | 2-1550nm           |   | B- 3 X BET     |  |
|              |    | 30P-30W Pulse         |   | HM-Multi-Mode  |   | P-ps Pulse, 700ps-10ns    |   | 3-532nm            |   | C- 5X BET      |  |
|              |    | 500C-500W CW          |   |  |   | C-CW/Modulation           |   | 4-2000nm           |   | D- 7X BET      |  |
|              |    |                       |   |  |   | L-Smart ns Pulse          |   |                    |   | E- 9X BET      |  |
| Example      |    | Product Code          |   | Description  |   |                           |   |                    |   |                |  |
| 1            | IF | L-20P-LM-N-1-D        |   | 20W Pulse (1060nm), low mode , M2<2, Pulse Width 4ns-350ns, With 7X BET        |   |                           |   |                    |   |                |  |
| 2            | IF | L-20P-SM-S-1-B        |   | 20W Pulse (1060nm), Single Mode, M2<1.3, Pulse Width 1.5ns-10ns, With 3X BET   |   |                           |   |                    |   |                |  |
| 3            | IF | L-20P-SM-P -1-C       |   | 20W ps Pulse(1060nm), Single Mode, M2<1.3, Pulse Width 700ps-10ns, With 5X BET |   |                           |   |                    |   |                |  |

#### iLuma Photonics Co., Ltd.