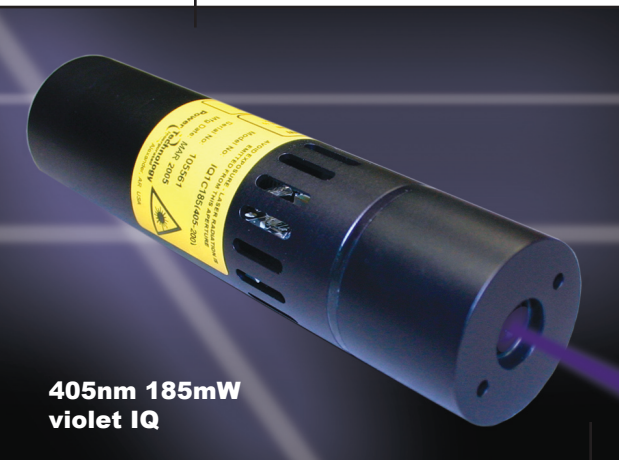


**Temperature
Controlled**

**Blue, Violet, & UV
Diode Lasers**

**473, 445, 405, & 375nm
IQ Laser Diode Modules**



**405nm 185mW
violet IQ**

Available wavelengths & output powers

- **473 ± 5nm:** 16mW
- **445 ± 5nm:** 16mW
- **405 ± 5nm:** 50mW, 185mW
- **375 ± 5nm:** 16mW
- Wavelength selection available

Features

- Active temperature control
- Stable wavelengths & output
- Beam circularization available
- Adjustable focus
- Modulated versions available

Potential applications

- Laser-induced fluorescence
- Spectroscopy
- Data storage
- Flow cytometry
- Cancer detection
- High-resolution printing
- Remote optical sensing
- Holography
- Illumination

Mechanical dimensions

- IQ1C: 38.1mm x 157.5mm
- IQ2C: 38.1mm x 191.0mm

Blue, violet, and ultraviolet laser modules at a glance

Compact, versatile, and highly cost-effective, our blue, violet, and ultraviolet IQ (Instrument Quality) laser diode modules are ideal replacements for bulky, inefficient gas lasers. Most applications that use Argon-Ion, Helium Cadmium, and blue Nd:YAG lasers can take advantage of this newer, more efficient technology. Such applications include laser-induced fluorescence, high-resolution printing, interferometry, confocal microscopy, holography, Raman spectroscopy, and bioanalysis.

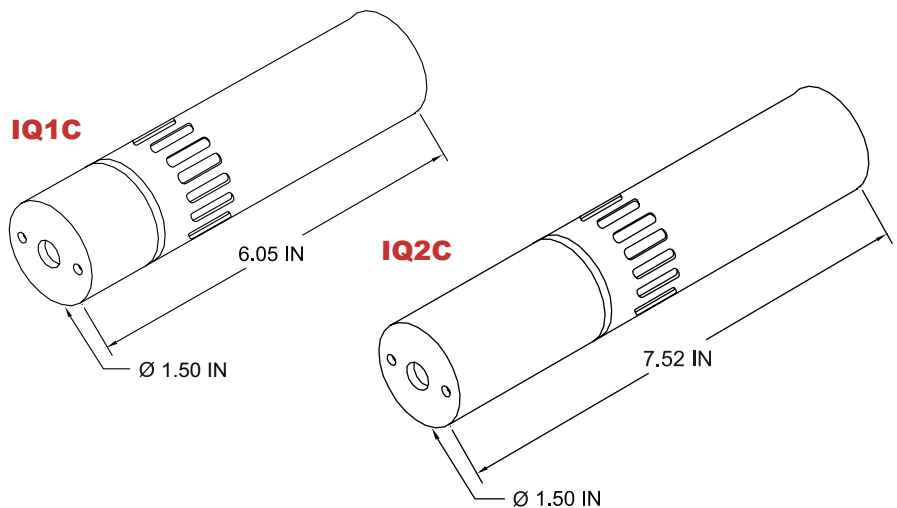
To meet the demands of *your* application, we now offer a 405 ± 10nm 185mW IQ, our highest power violet module to date. We also offer a cir-

cularized 405 ± 5nm 50mW violet IQ, in addition to our standard elliptical beam version. Also available is our 16mW blue IQ unit at 473 ± 5nm and our 40mW blue IQ at 445 ± 5nm. In addition, we offer a 16mW ultraviolet IQ module at 375 ± 5nm.

Our blue, violet, and ultraviolet IQ laser diode modules are available with a circularized beam or with standard elliptical output. In addition, each unit features active temperature control and exceptional wavelength stability. Modulated versions are also available.

See the reverse side for additional information regarding each of these units, and please give us a call if you have any questions.

**Ask About Our NEW IQ μ Module!
Microprocessor Driven With
On-Board Menu Control!**



Our IQ1C module operates in CW mode and can deliver up to 1000mA of drive current. The IQ2C is an alternate model that features anamorphic correcting prisms to produce a circularized beam. Beam modulation is available for each of these models.



Blue, Violet, & UV Modules Temperature Controlled

Blue, violet, & ultraviolet IQ series modules

For applications requiring blue, violet, or UV output and the ultimate in PTI temperature stability, our IQ (Instrument Quality) series modules feature wavelengths of $473 \pm 5\text{nm}$, $445 \pm 5\text{nm}$, $405 \pm 5\text{nm}$, and $375 \pm 5\text{nm}$.

Now available is our new **405nm IQ** with **185mW** of output. As our most powerful violet module to date, the 185mW IQ is ideal for your more demanding applications, including drug therapy research and cancer detection. Also available is a **circularized 405nm 50mW IQ**. This violet unit incorporates advanced beam shaping to bring you the ultimate in round beam quality. And still available is our standard **elliptical beam 405nm 50mW** unit.

Our **445nm 40mW** blue IQ not only is four times more powerful than its predecessor, but it has proven to be an ideal replacement for outdated blue HeCd lasers. In fact, the 440nm module is far more compact, efficient, and economical than its HeCd counterpart. We also offer a **473nm 16mW** blue module, a lower noise alternative to

473nm blue Nd:YAG lasers. Both the 445nm and 473nm units are available with a circularized beam.

For applications requiring ultraviolet output, we also offer a **375nm 16mW** IQ. The unit is available with circular or standard elliptical output.

Each of our IQ modules incorporates a precision current source and PID temperature control loop. For users, this exceptional temperature control translates into a stable wavelength and output power. Applications that can benefit from this technology are virtually limitless. Our IQ units are superb candidates for OEM integration, but they also find their way into a number of laboratories. Applications include remote optical sensing, data storage, flow cytometry, LIDAR, particle counting, and Raman spectroscopy.

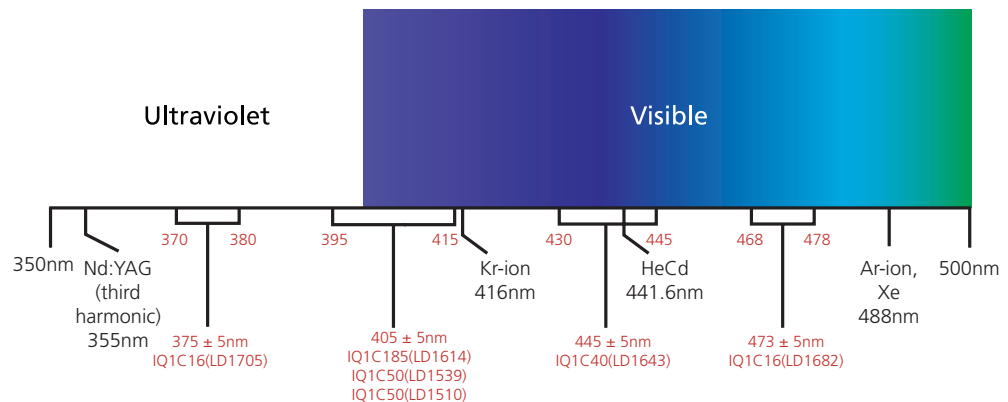
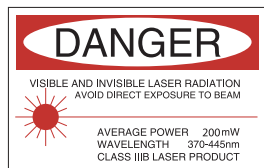
Each IQ can operate in either constant current or automatic power control mode and is available with CW or modulated output.

Specifications	NEW IQ1C16 (LD1682)	NEW IQ1C40 (LD1643)	IQ1C185 (LD1614)	IQ1C50 (LD1539)	IQ1C50 (LD1510)	NEW IQ1C16 (LD1705)
Wavelength (nm)	473 ± 5	445 ± 10	405 ± 10	405 ± 10	405 ± 10	375 ± 5
Output power (mW)	16	40	185	50	50	16
Beam shape	elliptical**	elliptical**	elliptical**	circular	elliptical**	elliptical**
Collimated beam size at exit, typical, 1/e ² (mm)	4.0 x 2.5**	4.0 x 2.5**	3.0 x 1.3	1.3	4.0 x 2.5**	4.0 x 2.5**
Focus	customer adjustable					
Beam divergence (mrad)	<0.5		<1	<0.5		
Operating voltage (VDC)	11-14					
Maximum operating current (mA)	3000					
Dimensions, Ø x L, in. / mm	1.5 x 6.2 / 38.1 x 157.5***	1.5 x 6.2 / 38.1 x 157.5***	1.5 x 6.2 / 38.1 x 157.5	1.5 x 6.2 / 38.1 x 157.5	1.5 x 6.2 / 38.1 x 157.5***	1.5 x 6.2 / 38.1 x 157.5***

**Beam circularization available.

***IQ modules containing anamorphic prisms for beam correction are 7.5" [191.0mm] in length. See IQ2C drawing on the opposite side of this specification.

Recommended Models



Please note: Lasers with wavelengths below 400nm are Class IIIb products in accordance with CDRH regulations.

DS_Blue, Violet, & UV 8-06

