

# Skylark 780

Single frequency CW C-DPSS  
NIR laser

The Skylark 780 laser is specifically designed for deployment in systems using rubidium transitions. With outstanding beam characteristics, ultra-stable output, and ultra-compact footprint, the 780 NX is ideal for demanding applications requiring a 780 nm wavelength.

## Key features



**Ultra-narrow linewidth**  
< 0.2 MHz



**High spectral stability**  
< 0.2 pm over 8 hours



**High power stability**  
< 1% over 8 hours



**Integrated design**  
Easy to install

## Applications

Raman spectroscopy, metrology, quantum technologies

## Specifications

### Output beam parameters

|                                  |                                  |
|----------------------------------|----------------------------------|
| Output power                     | up to 200 mW                     |
| Wavelength                       | 780 nm                           |
| Spectral bandwidth               | ≤ 0.2 MHz                        |
| Spatial mode                     | TEM00                            |
| Spectral stability               | ± 0.2 pm (over 8 hour operation) |
| Coherence length                 | > 200 m                          |
| Output power stability           | ≤ 1.0 % (over 8 hour operation)  |
| Output power noise               | ≤ 0.1 % RMS (10 Hz - 10 MHz)     |
| Beam divergence                  | 1.0 mrad, diffraction limited    |
| Beam diameter at output aperture | 0.8 - 1.2 mm                     |
| Beam pointing stability          | ≤ 5 μrad/°C                      |

### Laser head dimensions

|             |                  |
|-------------|------------------|
| L x W x H   | 170 x 95 x 75 mm |
| Beam height | 65 mm            |

### Environmental conditions

|                                |                          |
|--------------------------------|--------------------------|
| Ambient temperature range      | 18 - 30 °C               |
| Laser head interface stability | ± 1.5 °C                 |
| Storage                        | 0 - 50 °C                |
| Humidity                       | 0 - 50 %, non-condensing |
| Laser head                     | Hermetically sealed      |

### Integration features

|                            |                           |
|----------------------------|---------------------------|
| Plug-in USB Connectivity   | Combined Heatsink         |
| Versatile Control Software | Remote Diagnostic Support |

### Optional accessories

|                               |  |
|-------------------------------|--|
| Heatsink                      | Fan-assisted air cooled or,<br>Water-cooled thermoelectric chiller |
| External manual power control | 0 - 100 %, continuous  |

### Warranty

|                   |                               |
|-------------------|-------------------------------|
| 12 month warranty | For laser head and controller |
|-------------------|-------------------------------|