

Coherent® LightSmyth™ 1030nm, 1739.13 Grooves/mm, 31.8 x 20.2mm Transmission  
Diffraction Grating

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LightSmyth™ Transmission Diffraction Gratings

Stock **#16-866** [CONTACT US](#)

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+

£1,100<sup>00</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | £1,100.00 each                |
| Qty 10-24      | £990.00 each                  |
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 Prices shown are exclusive of VAT/local taxes

Product Downloads

General

1379487

Model Number:

Transmission Diffraction Grating

Type:

Note:

S-Polarization defined with E-field parallel to the grating grooves

| Physical & Mechanical Properties           |                                         |
|--------------------------------------------|-----------------------------------------|
| 0.001                                      | Groove Density Uniformity (grooves/mm): |
| 31.80 x20.20                               | Dimensions (mm):                        |
| 30.80 x19.20                               | Clear Aperture CA (mm):                 |
| Multi-Layer Dielectric Binary Etch Grating | Construction:                           |
| 31.80                                      | Length (mm):                            |
| 0.95 ±0.050                                | Thickness (mm):                         |
| 20.20                                      | Width (mm):                             |
| 0.1 (typical)                              | Alignment of Grooves to Edge (°):       |

| Optical Properties          |                                     |
|-----------------------------|-------------------------------------|
| 1739.13                     | Groove Density (grooves/mm):        |
| 1030 ±10                    | Design Wavelength DWL (nm):         |
| ≥94 @ 1030nm                | Minimum Efficiency (%):             |
| 63.6 ±1                     | Angle of Incidence (°):             |
| Dielectric                  | Coating:                            |
| Fused Silica (Corning 7980) | Substrate: <input type="checkbox"/> |
| 60-40                       | Surface Quality:                    |
| S                           | Polarization:                       |

| Regulatory Compliance |                             |
|-----------------------|-----------------------------|
| <a href="#">View</a>  | Certificate of Conformance: |

## Product Details

- High Diffraction Efficiency (>94% Absolute) and Low Scatter
- Polarization Independent and Single Polarization Optimized Gratings
- Robust Inorganic Materials for Superior Power Handling and Reliability
- Designs for NIR Wavelengths between 800 - 1800nm

Coherent® LightSmyth™ Transmission Diffraction Gratings are manufactured through a precision lithographic wafer-scale fabrication process and provide excellent optical performance, low polarization sensitivity, and low scatter. These gratings have a high diffraction efficiency of ≥94%, minimizing optical losses when used in multi-pass configurations. Gratings designed for near infrared (NIR) wavelengths between 800 - 1800nm are available with all featuring a precision line density uniformity of 0.001 lines/mm. Coherent® LightSmyth™ Transmission Diffraction Gratings are used in demanding applications including Spectral Beam Combining (SBC), LiDAR, optical telecommunications, pulse compression of pico- and femtosecond pulses, and spectroscopy. These gratings contain no organic materials and can be used with high power lasers and in environments up to 500 °C with no effects on performance. Please contact us for custom sizes or OEM requirements.

**Note:** II-VI Incorporated is now Coherent Corp.

## Special Handling

These optics require special handling to avoid damage and ensure long-term performance. Proper handling, cleaning, and storage are essential to maintain optical quality. Explore our [Optics Cleaning Resources](#) for step-by-step guides and best practices. For personalized assistance, [Email us](#) or [Chat](#) with our technical support team.



Component Handling Tools

## Custom

Edmund Optics offers comprehensive custom manufacturing services for optical and imaging components tailored to your specific application requirements. Whether in the prototyping phase or preparing for full-scale production, we provide flexible solutions to meet your needs. Our experienced engineers are here to assist—from concept to completion.

Our capabilities include:

- Custom dimensions, materials, coatings, and more
  - High-precision surface quality and flatness
  - Tight tolerances and complex geometries
  - Scalable production—from prototype to volume
- Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).
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