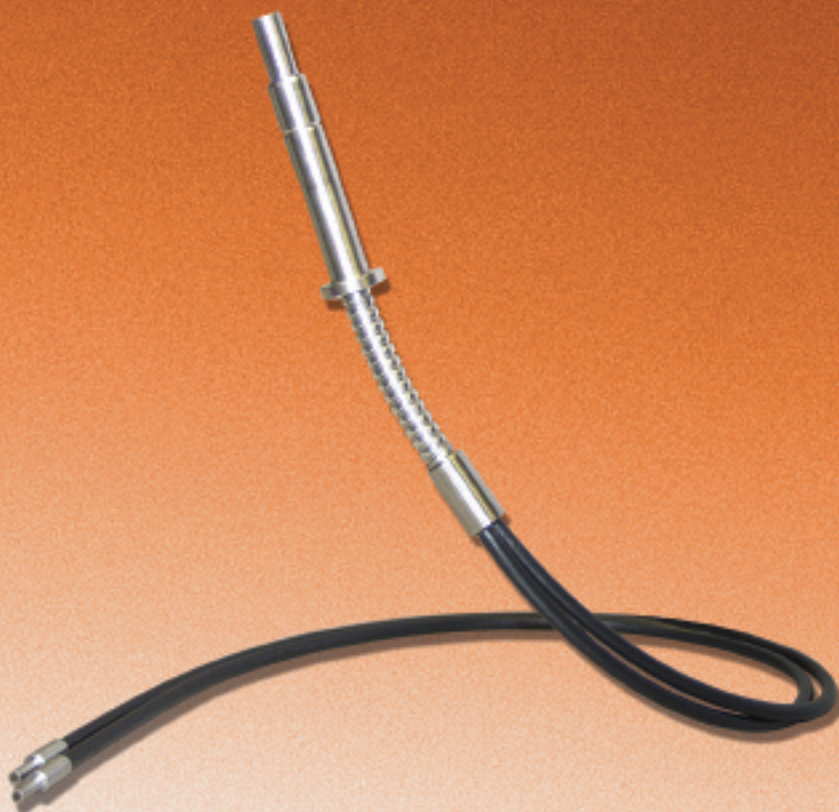


HIGH

POWER FIBER LIGHT GUIDE

UV/VISIBLE SPOT CURING



EXFO High Power Fiber Light Guides are ideal for use when multiple outputs are required with uniform intensity to each output. Our High Power Fiber Light Guides provide 50% greater throughput than standard Quartz Fiber Light Guides and are virtually free of optical degradation. High Power Fiber Light Guides provide 25% more output than bifurcated liquid light guides and do not require balancing.

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EXFO
EXPERTISE REACHING OUT



REPEATABILITY



CONTROL



SPEED



PRECISION

Precision Technology Light Years Ahead

HIGH POWER FIBER LIGHT GUIDES

How Will High Power Fiber Light Guides Save You Money?

Longer Lamp Life

High Power Fiber Light Guides provide 25 to 50% more throughput, to give you more energy from your lamp. The more energy your lamp starts with, the longer you can use your system before the lamp needs replacing. Longer lamp life means fewer replacement lamps which lowers your cost of operating the system.

Higher Yields

When using multi-legged light guides it is necessary to have equal energy to each leg for even curing. High Power Fiber Light Guides have less than 5% difference between legs. Even curing means higher yields for your process which lowers your costs.

Less Operator Intervention

Multi-legged liquid light guides require balancing to achieve even distribution of power between legs. High Power Fiber Light Guides provide even distribution with no balancing required so your operators spend less time balancing light guides and more time making parts.

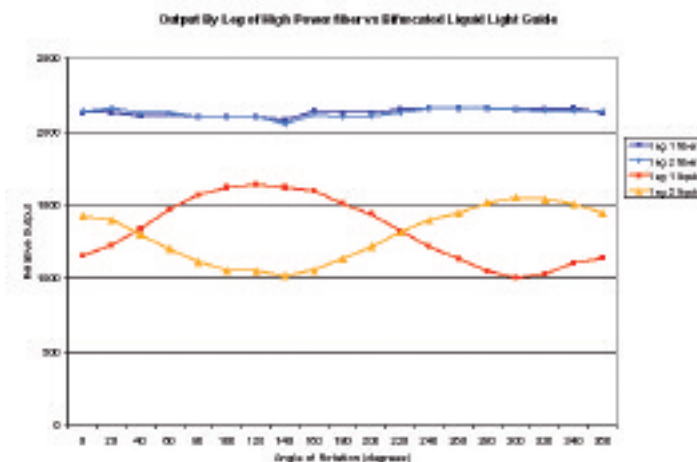
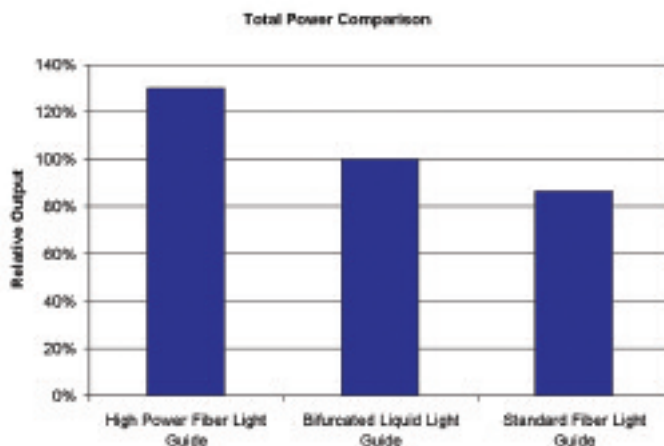
Never Needs Replacing

Liquid Light Guides need replacing about every two years. High Power Fiber Light Guides have been tested to over 60,000 hours of exposure of unfiltered light with no degradation. Therefore; you will never need to replace your light guides again.

OmniCure® Platform

EXFO High Power Fiber Light Guides are ideal for use with the OmniCure® Series 1000 and OmniCure® Series 2000 due to:

- Longer lamp life
- Higher yields
- Less operator intervention
- Never needs replacing



OmniCure® Series 1000



OmniCure® Series 2000



How Do High Power Fiber Light Guides Work?

The transmission efficiency of the light guide is directly related to the packing fraction and Numerical Aperture (NA) of the individual fibers within the bundles.

Higher Packing Fraction

This is the ratio of the active core area of a fiber bundle to the total area at its light-emitting or receiving end. It refers to the maximum number of fibers that can physically be packed together in a specified area. No light is transmitted in the spaces between fibers.



The fibers on the input end of EXFO High Power Fiber Light Guides are fused together to eliminate inter-fiber spaces. With a packing fraction of 0.53 on typical standard Fiber Light Guides, 47% of the area of the light guide input is space between fibers where no light is transmitted.

High Numerical Aperture (NA)

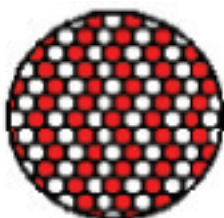
This number expresses the light gathering ability of a fiber, related to the acceptance angle. The NA of the High Power Fiber Light Guide is 0.37 compared to typical fiber bundles with an NA of 0.22. The 42° full acceptance angle of the High Power Fiber Light Guide lets more light into the guide compared to 25° for the standard fiber guide.

Specially Designed Inputs

Fibers at the input end of High Power Fiber Light Guides are fused together in a specially designed pattern to ensure equal energy through each leg of the guide. Typical Quartz Fiber Light Guides have a randomized pattern of fibers at the input face of the guide; leaving equal distribution between legs up to chance. Liquid light guides have two separate inputs so the guides must be manually balanced to achieve equal energy between legs.

Cross Section of Light Guides

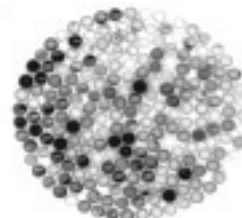
High Power Fiber Light Guides



Liquid Light Guides



Quartz Fiber Light Guides



Specifications

Description

Throughput	Over 80% of the source
Divergence	Numerical Aperture 0.37
Uniformity between Output legs	+/- 5%
Wavelength	Transmits 160 to 1200nm
Minimum Bending Radius	5cm
Optical Degradation	Over 95% transmission after over 60,000 hours tested from unfiltered light source

Custom Guides Available

EXFO Precision Assembly Group offers in-house custom design capabilities that allows customers to request unique Light Guide configurations that will easily adapt to any assembly challenge. If you don't see a light guide that fits your process; please contact EXFO's Business Development Group at bdg.toronto@exfo.com or + 1 905-821-2600 for further information.



EXFO Precision Assembly Group is certified under the ISO 9000 Quality Management System. Our global customers can trust that EXFO strives to be the best possible supplier in all aspects of our business.

HIGH POWER FIBER LIGHT GUIDE



EXPERTISE REACHING OUT

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