

OmniCure High Power Fiber Light Guide

Delivers High Output UV Curing Energy Exactly Where You Need It and How You Need It

The OmniCure® High Power Fiber Light Guides (HPFLG) are ideal for use when multiple outputs with equal intensities to each output are required. Excelitas Technologies' proprietary fused fiber bundle and higher Numerical Aperture (NA) allow OmniCure HPFLGs to capture maximum light power from the UV curing light source and provide a high performance UV solution. Fiber light guides are virtually free of optical degradation compared to liquid light guides.

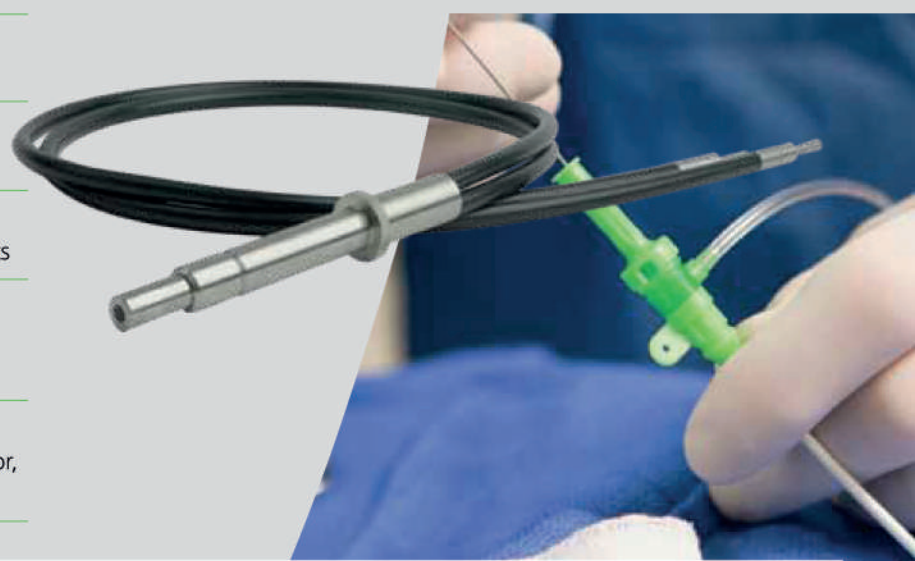
Improves UV high power transmission from the light source to multiple curing sites

Reduces UV manufacturing costs with faster curing time, higher yields and improved power efficiency

Delivers equal distribution (+/-5%) of light energy to curing sites from a single light source for repeatable, high quality results

Multi-legged guides provide 25%-50% higher throughput than comparable multi-legged liquid light guides to transmit greater energy from the lamp

Offers a wide range of standard light guides (3mm, 5mm, multi-leg) and output adaptors (cure ring, light line, collimator, 90° angle) to meet customers' specific needs



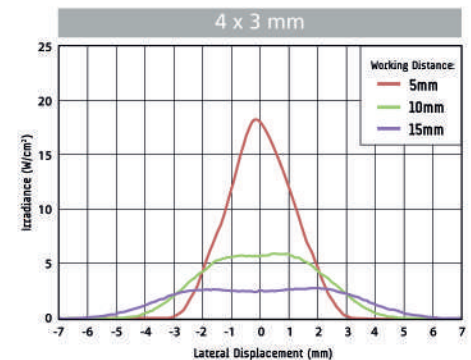
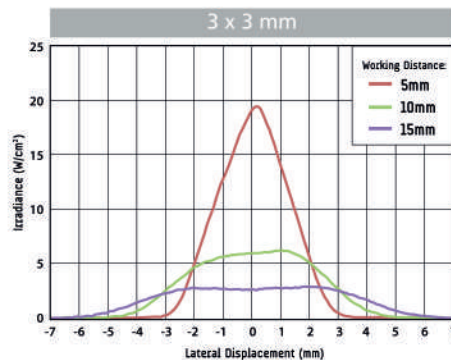
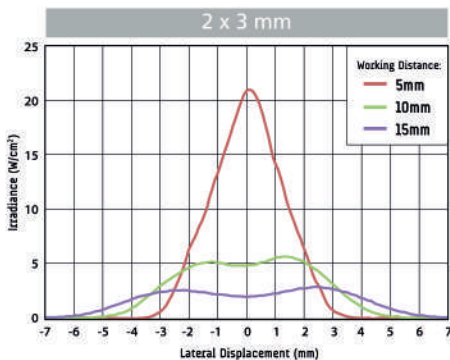
FEATURES	BENEFITS
No optical degradation resulting in longer lifetimes than liquid light guides	Eliminates liquid light guide replacement costs
Higher output than comparable multi-legged liquid light guides	Improves lamp usable lifetime and reduces operating costs
Balanced output through multiple legs (+/-5%)	Provides higher yields for your curing processes and faster manufacturing equipment setup time
Transmitted light wavelengths from 160nm to 1200nm	Enables tack-free UV light curing for most adhesives

OmniCure High Power Fiber Light Guide

GENERAL SPECIFICATIONS

Spectrum Range	160 nm to 1200 nm
Multi-legged Output Balancing Tolerance	+/-5%
Numerical Aperture (NA):	0.37

Beam Profiles with the OmniCure® S2000 Additional beam profiles available, please contact our sales department.



Typical irradiance measurements with a tolerance of +/- 10% (System lamp lifetime: < 100 hours).

Typical Output

HPFLG	Average Irradiance (W/cm²)**			Power (W)*		
	S2000	S1500	S1000	S2000	S1500	S1000
2 x 3 mm	22.6	22.8	18.7	1.6	1.6	1.3
3 x 3 mm	20.0	23.2	14.3	1.4	1.5	1.0
4 x 3 mm	17.9	18.1	11.5	1.3	1.3	0.8

* Total power measured by an OmniCure R2000 Radiometer (Working distance: 0 mm).

** Average irradiance: Power at the individual leg output of the light guide divided by the output area.

Light Guide Cross Section



High Power Fiber Light Guide

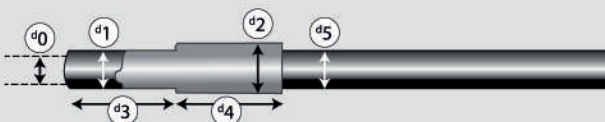


Standard Randomized Fiber Light Guide

The uniform distribution of the fibers within the High Power Fiber Light Guide allow an equal distribution of light energy among each leg in a multi-legged Light Guide.

Light Guide Output Dimensions

Core	End Fittings					Tube	Min. Bend Radius
	∅1	∅2	∅3	∅4	∅5		
3 mm	5 mm	9 mm	20 mm	25.2 mm	7 mm	40 mm	
5 mm	7 mm	10 mm	20 mm	25.2 mm	9.5 mm	60 mm	



Ordering Guideline

Light Guide	Length	Part Number
2 x 3 mm	1000 mm	806-00005
3 x 3 mm	1000 mm	806-00007
4 x 3 mm	1000 mm	806-00006

Additional configurations available; please contact our sales department at OmniCure@excelitas.com.

For Scandinavia and the Baltics sales and support, please contact EFSEN UV & EB TECHNOLOGY.

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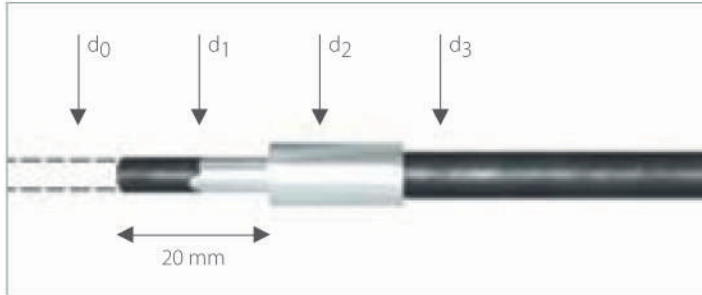
For a complete listing of our global offices, visit www.excelitas.com/locations

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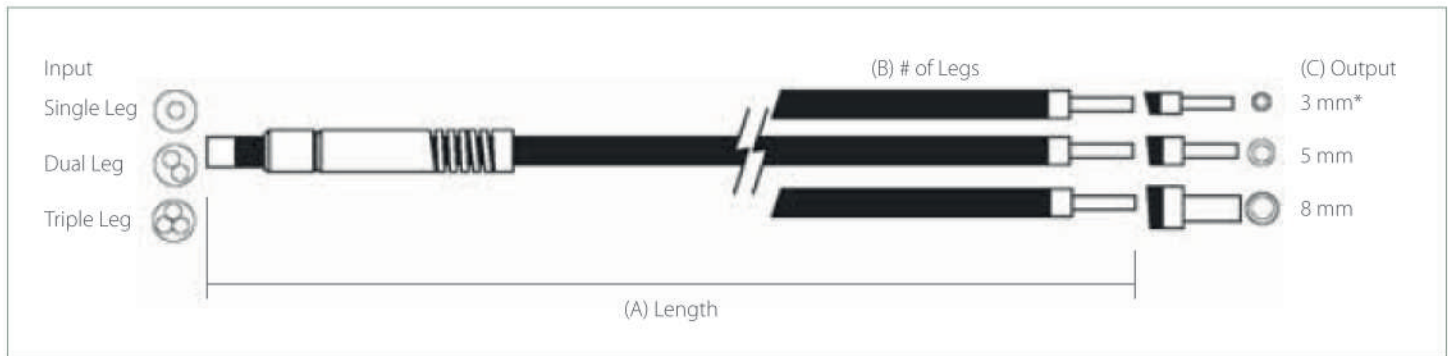
Custom Liquid Light Guides

Specifications

Throughput	Over 80% of the source
Divergence	Numerical Aperture 0.59



Core (mm) d0	End Fittings (mm)		Tube (mm) d3	Min. Bend Radius (mm)
	d1	d2		
3	5	9	7	40
5	7	10	9.5	60
8	10	15	12.5	100



A Overall Length	B # of Legs	C Active Output Diameter	D Wavelength Range
750 mm	1	3 mm*	320-600 nm (Standard)
1000 mm	2	5 mm	250-600 nm (Extended)
1500 mm	3	8 mm	
2000 mm			
3000 mm			

*Note: For multi-legged light guides, the active output diameter must be 3 mm.

Part numbers: 805-00002 to 805-00041.

Please submit your light guide request to OmniCure® for design validation, pricing, and lead time.

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Cure Ring Optical Accessory

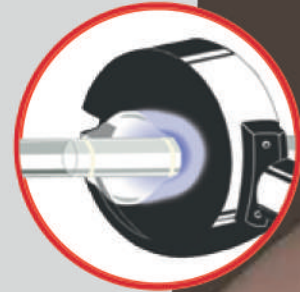
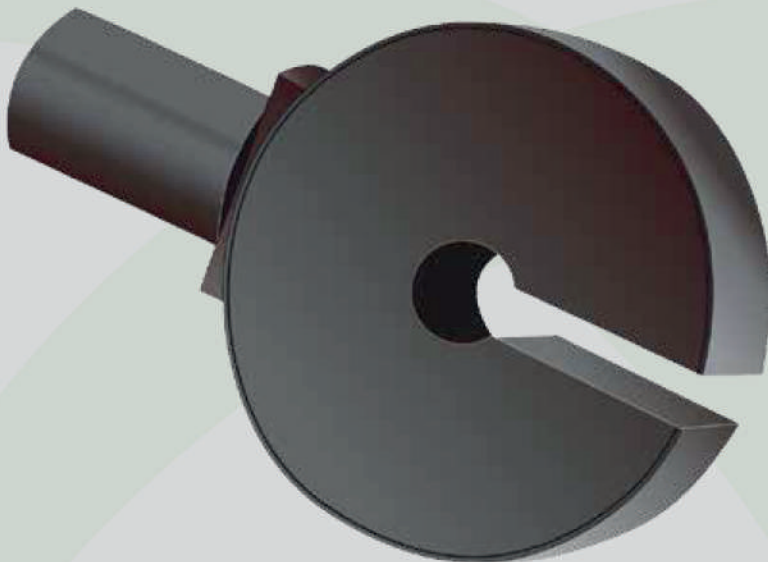
360° of Curing Power

Cure Ring technology allows a light guide 360° of curing power. The standard ring for use with liquid light guides is available in solid or slotted versions. The hinged Cure Ring coupled to a special dual-leg fused-silica light guide easily opens and closes using a spring-loaded hinge design for rapid insertion and removal of parts. Cure Rings are ideal for bonding a number of medical devices such as catheters and tubes, cables or any other parts that require 360° curing.

Available in solid, slotted or hinged versions

Provides a 360-degree beam of light

Couples to standard OmniCure® Liquid Light Guides and High Power Fiber Light Guides



OmniCure Cure Ring Optical Accessory

Applications

This optical accessory is ideal for applications including:

- Connectorizing fibers
- Tubing or cable to connector bonding
- Catheter bonding

SPECIFICATIONS

DESCRIPTION

Fiber	Randomized fiber bundle split into ten nodes for the solid Cure Ring and nine nodes for the slotted version (Numerical Aperture = 0.22)
Throughput	Approximately 30% of the output of a single liquid filled light guide
Uniformity	+/- 10% across the nodes

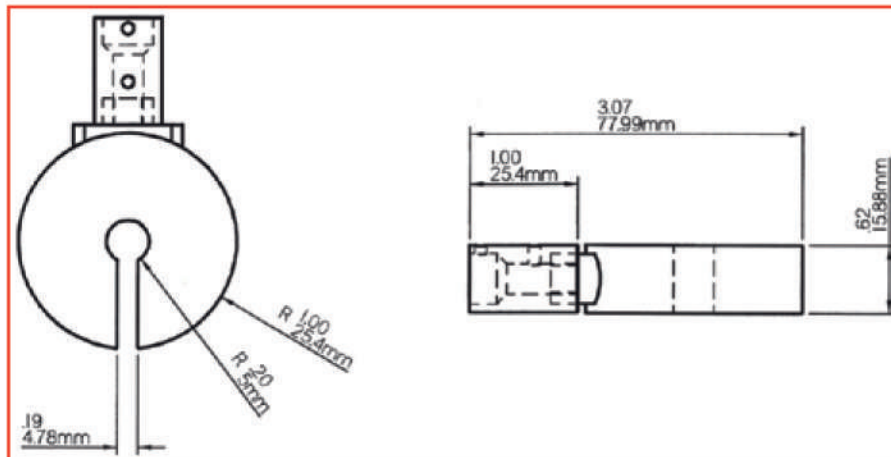
PART NUMBER

PRODUCT DESCRIPTION

810-00048	Cure ring, slotted, 63.5 mm OD, 10 mm ID for 5 mm LG Typical delivery time: 10 to 12 weeks
810-00049	Cure ring, no-slot, 63.5 mm OD, 10 mm ID for 8 mm LG Typical delivery time: 10 to 12 weeks
810-00050	Cure ring, no slot, 63.5 mm OD, 15 mm ID for 5 mm LG Typical delivery time: 10 to 12 weeks

CURE RING DIMENSIONS:

All dimensions are shown in inches and millimeters. Dimensions relate to the standard OmniCure Cure Ring and are for the purpose of providing fixturing and clearance detail. Customized solutions are available upon request.



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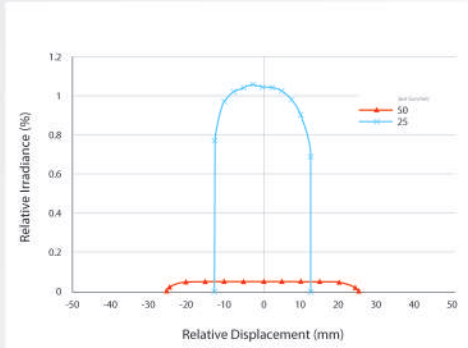
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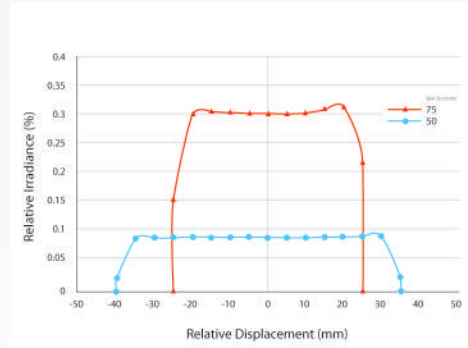
ADJUSTABLE COLLIMATING ADAPTER

UNIFORMITY OF SPOT SIZES from various light guides

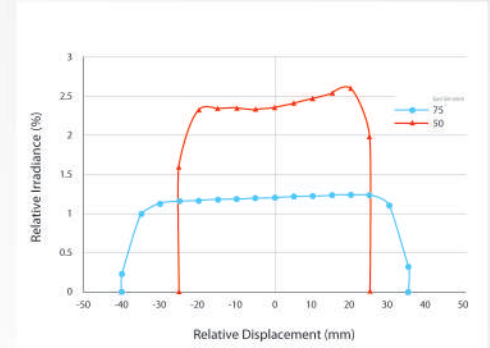
Beam Profiles



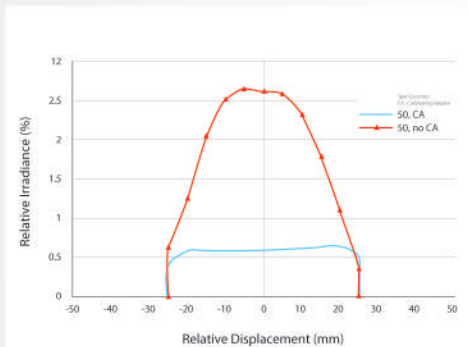
3mm Liquid Light Guide with Adjustable Collimating Adaptor		
SPOT SIZE (mm)	DISTANCE AWAY (cm)	IRRADIANCE mW/cm ²
50	38.20	7.22
25	19.40	135.00



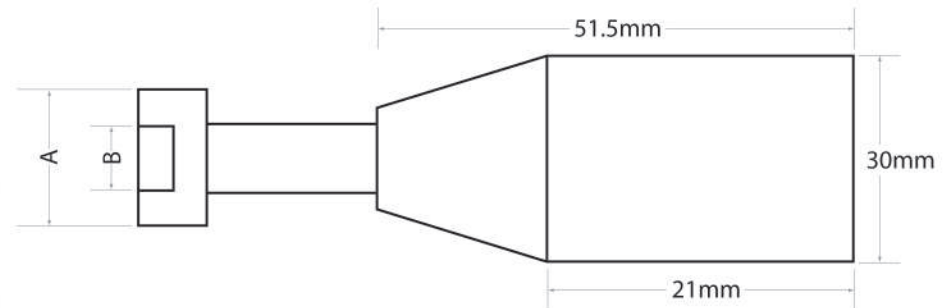
5mm Liquid Light Guide with Adjustable Collimating Adaptor		
SPOT SIZE (mm)	DISTANCE AWAY (cm)	IRRADIANCE mW/cm ²
75	57.02	10.02
50	22.10	70.00



8mm Liquid Light Guide with Adjustable Collimating Adaptor		
SPOT SIZE (mm)	DISTANCE AWAY (cm)	IRRADIANCE mW/cm ²
75	18.80	74.50
50	14.70	184.00



8mm Liquid Light Guide with/without Adjustable Collimating Adaptor		
Spot Size (mm)	DISTANCE AWAY (cm)	IRRADIANCE mW/cm ²
50 (without CA)	3.50	707.00
50 (with CA)	14.70	184.00



Light Guide Holder Dimensions				
		A	B	C
3mm	mm inches	17.78 0.70	9.25 0.36	12.7 0.50
5mm	mm inches	17.78 0.70	10.21 0.40	12.7 0.50
8mm	mm inches	21.59 0.85	14.99 0.59	13.79 0.54

As you can see, you can achieve a uniform distribution of light by using an Adjustable Collimating Adaptor.

NOTE: All measurements were taken with an LDGI R2000 Cure Site Radiometer.

NOTE: All dimensions are shown in inches and millimeters. Dimensions relate to standard LDGI Adjustable Collimating Adaptors and are for the purpose of providing fixturing and clearance details. Customized solutions are available upon request.

For 3mm, 5mm and 8mm Adjustable Collimating Adaptors, Part Numbers: 810-00041, 810-00042, 810-00043

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