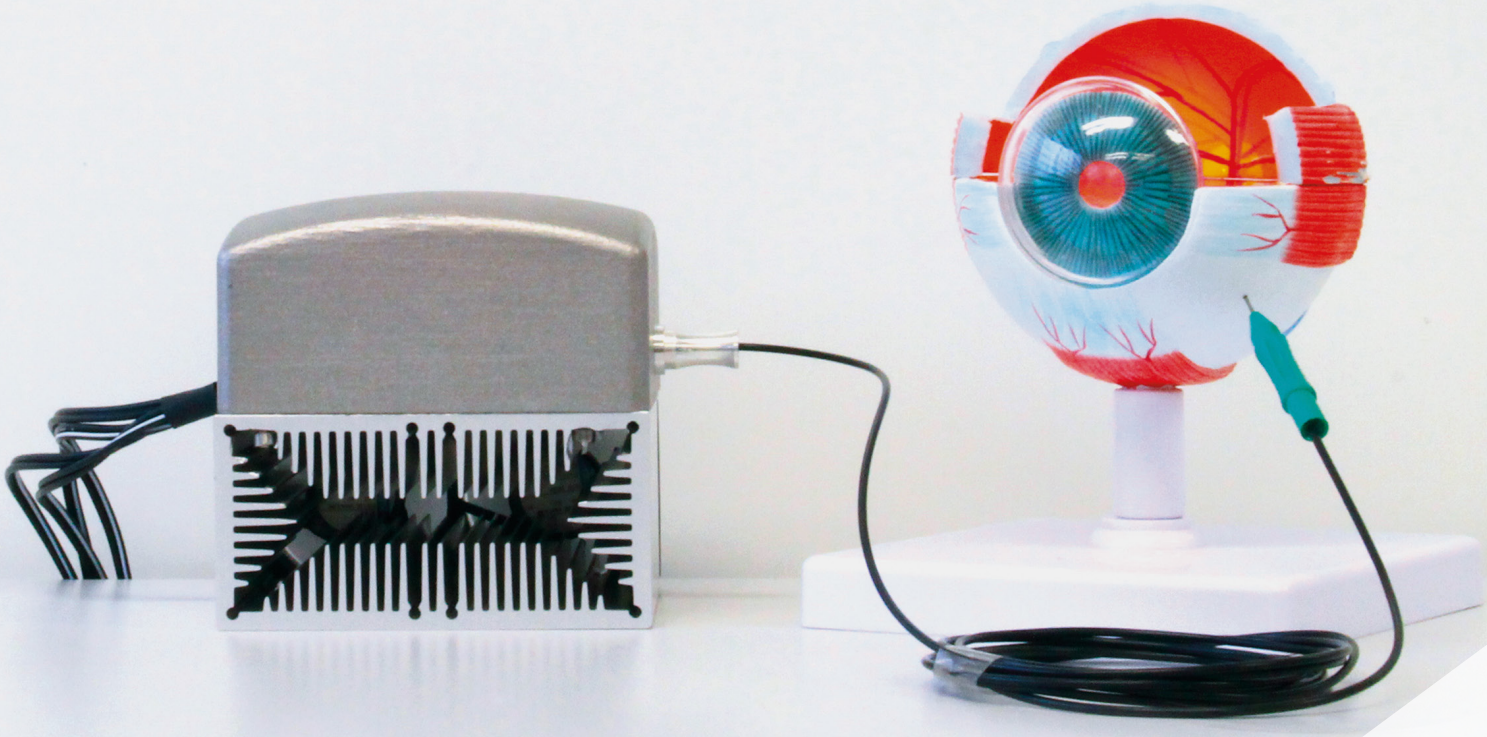
OEM RGB AND WHITE LED ILLUMINATION MODULES.

HIGH OUTPUT ILLUMINATION
FOR MEDICAL APPLICATIONS.



BERLINER GLAS
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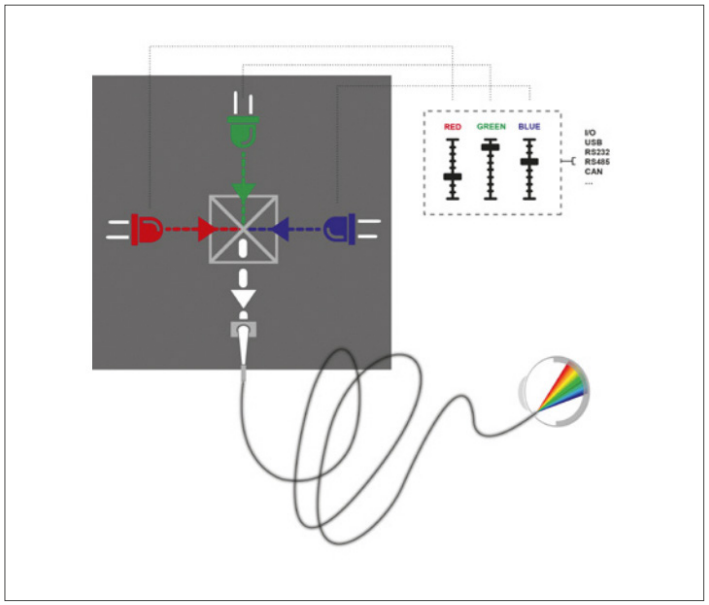
For surgical applications in ophthalmology the use of fibers that are on the order of 700 µm or less is typical. This allows the least invasive solution for the patient and is therefore highly desirable. The use of these small diameters with any illumination source is challenging due to the difficulty of coupling the light into the fibers.

Berliner Glas has developed an OEM high output illumination module that is capable of efficiently coupling LED light sources into even the smallest light guides or fibers.
LEDs have significant advantages over Xenon sources including longer life, energy efficiency, and in the case of the Berliner Glas modules, the ability to tune the color temperature of the light for better diagnostic information.



High light output: 40 lumens at the end of a thin light guide of 20 gauges realized with RGB LED

Compact design: enables easy integration in customer application or customer system

Flexible color values: tunable light colors

System independent: light source can be adapted to light guides from different manufacturers

APPLICATIONS

- Endo-illumination
- Medical endoscopy
- Microscopy
- Boroscopy

SPECIFICATIONS

Optical Specifications

Lamp	Optional RGB or white
Luminous flux	40 lumen measured at the end of an 1 m optical fiber with a diameter of 20 gauge and a NA of 0.5
Color temperature	White: approx. 6,500 K
Color rendering index	White: Ra > 75 (typically)
Coupling optics	According to customer request

Electrical Specifications

Reverse polarity protection	Yes
Overheat protection	Yes
Current monitoring	Yes
Adustment luminous flux	Feed forward control, customized closed-loop control is possible
Electronical shutter	Optical turn off of the LED in case of missing light guide
Fan control	Optional
Remote control	USB 2.0 and 3.0 interface

Mechanical Specifications

Dimensions (l x w x h)	48 x 50 x 120 mm
Weight	From approx. 200 g
Optical fiber pin	According to customer request
Cooling	Optional active or passic cooling

Environmental Conditions

Operating temperature	0–40 °C
Operating altitude	max. 2,000 mm
Storage temperature	-20–60 °C
Relative humidity	30–90 %, noncondensing

FEATURES ON REQUEST

- Customized coupling unit for other fiber diameters
- Additional coupling of other colors to adjust the color temperature
- Microprocessor controlled displays with value for:
  1. LED temperature (with optional cut-off switch in case
  2. of overheating)
  3. Hour meter
  4. Log book (protocol)
  5. Additional customer-specific displays implementable

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