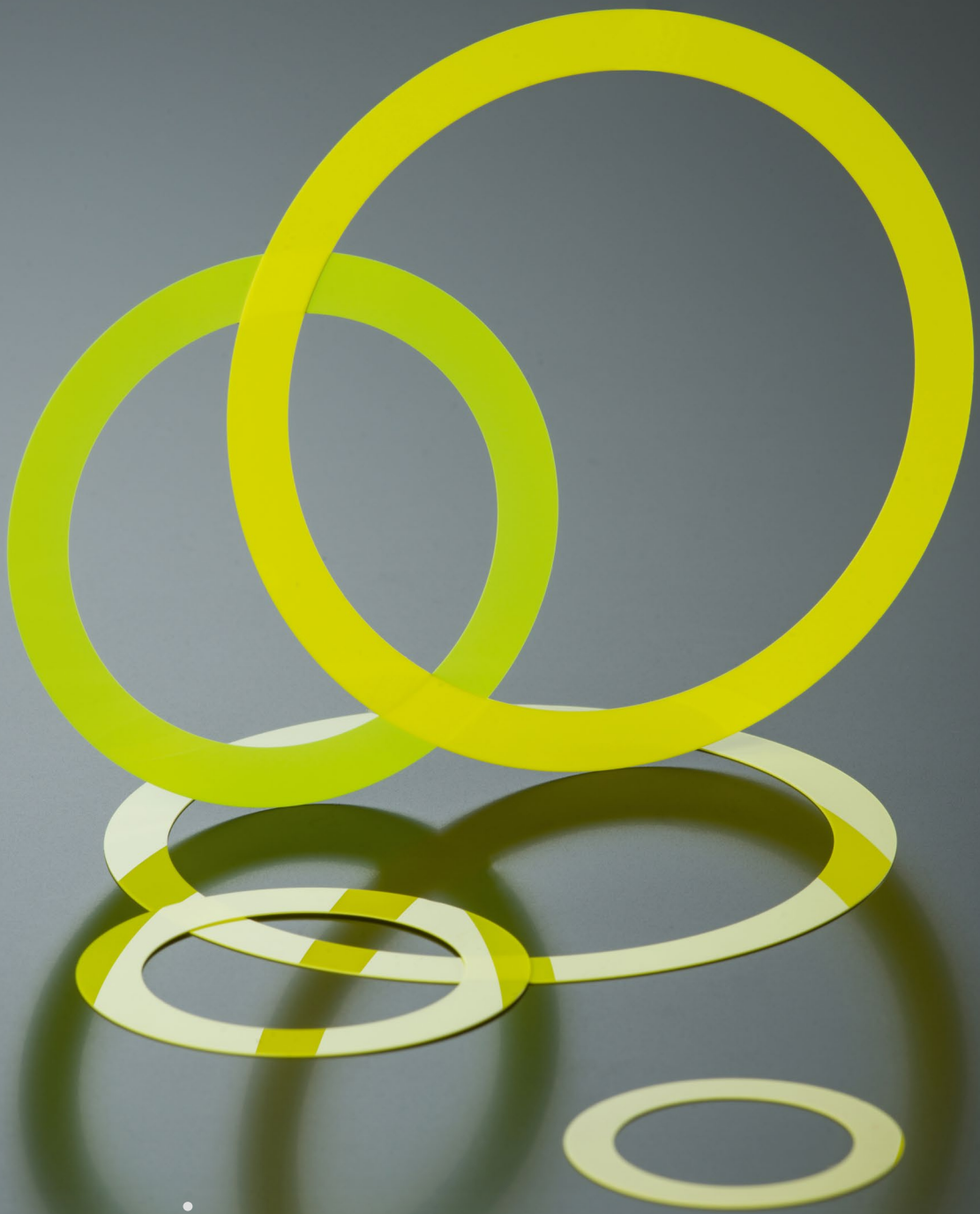
SCHOTT



Dynamic ceramic converter

Enabler for high luminance light sources

Version January 2026

Dynamic ceramic converter

SCHOTT dynamic converters provide high irradiance and superior luminance, offering high reliabilty for digital projectors.

Thanks to these products, laser projectors offer reliable performance, specifically in terms of brightness and color that remains constant over time. There is no need to change bulbs, which significantly lowers the total cost of ownership and energy costs. In addition, they do not require a warm-up period.

Since this component is a pure, inorganic phosphor material, it exhibits a high temperature stability and outstanding heat conductivity. This leads to superior efficiency and reliability, which makes SCHOTT's ceramic converters a unique solution on the market.

The basis for this is an ingenious, reproducible production process that delivers reliable, quality-tested products. To cover the complete color gamut for digital projection, SCHOTT ceramic converter components are available in several versions of yellow or green ceramic phosphor material.

Advantages

Your brighter solution from SCHOTT is based on:
- Inorganic material for a long lifetime performance:
  - High temperature stability
  - Good heat conductivity
  - High Efficacy
  - Superior irradiance limit
- Fit to color gamut

Services

- Application and product development support including simulation to identify optimal material or material combination for specific customer designs
- Ability to design to customer needs in size and color

Contact our experts anytime to discuss your personal product needs – together we will find your perfect solution!

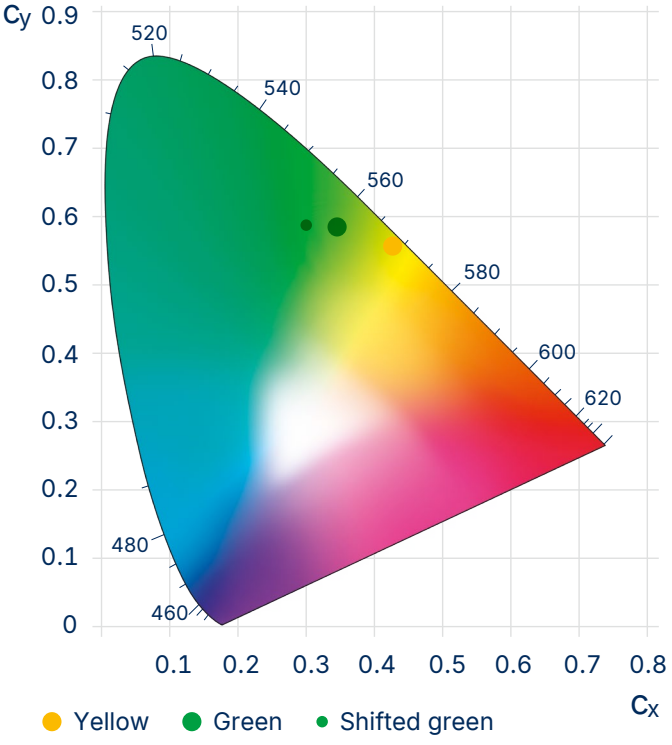
Applications

- Phosphor wheel for digital projection
- Specialty lighting such as spotlights and search lights
- High luminance light sources for microscopy, machine vision and general lighting

Supply Forms

SCHOTT manufactures ceramic phosphor converters
- from various materials and
- in various standard geometries.

Customized geometries and materials are available on request.



Emission color coordinates of green and yellow ceramic converter material in the CIE 1931/2° color space

Technical details – yellow and green

Yellow (225 µm thickness[1], polished ring or ring segment)

Optical specifications	Yellow SYA35[2]	Yellow SYA35i	Yellow SYB35[2]	Yellow SYB35i	Yellow SYC35[2]	Yellow SYC35i	Yellow SYF35i
Conversion efficacy [lm/W]	310 ± 20	330 ± 15	325 ± 15	335 ± 15	315 ± 15	325 ± 15	290 ± 15
Emission color coordinates c_x	0.413 ± 0.01	0.413 ± 0.01	0.417 ± 0.005	0.417 ± 0.005	0.432 ± 0.005	0.432 ± 0.005	0.410 ± 0.01
Emission color coordinates c_y	0.561 ± 0.01	0.561 ± 0.01	0.560 ± 0.005	0.560 ± 0.005	0.549 ± 0.005	0.549 ± 0.005	0.562 ± 0.01

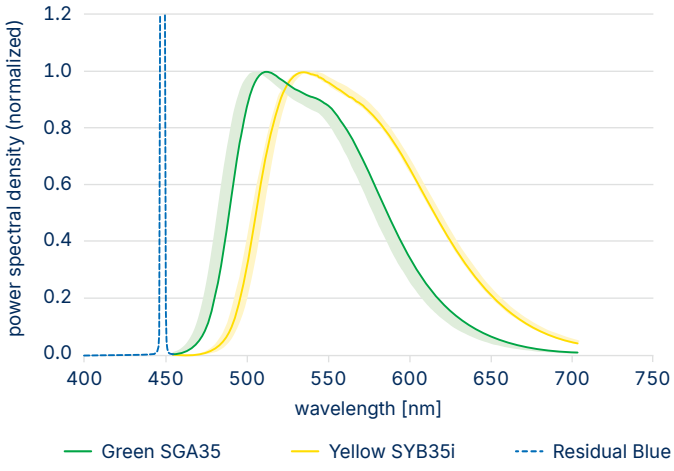
Green (225 µm thickness[1], polished ring or ring segment)

Optical specifications	Green SGA35	Green SGB35	Green SGF35	Green SGG35	Shifted Green GGB35
Conversion efficacy [lm/W]	330 ± 20	320 ± 20	280 ± 20	250 ± 20	325 ± 20
Emission color coordinates c_x	0.337 ± 0.005	0.330 ± 0.01	0.324 ± 0.01	0.320 ± 0.01	0.300 ± 0.01
Emission color coordinates c_y	0.591 ± 0.005	0.588 ± 0.01	0.584 ± 0.01	0.580 ± 0.01	0.588 ± 0.01

Emission spectrum defined by the power spectral density > 465 nm.
Efficacy specified for emission spectrum.
Efficacy and color coordinates measured with 60° incident angle of blue laser (449.5 nm) at low laser power.
465 nm, detected in normal direction.

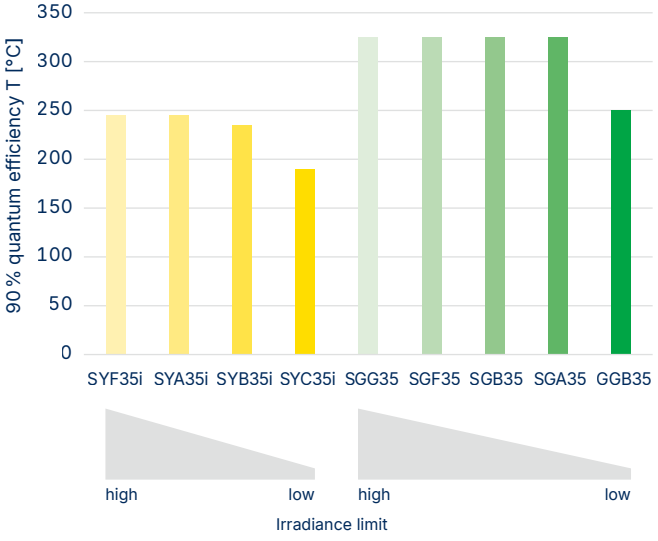
Anti-reflection coating on request.
Details on spectra and drawings on request.
For safety reasons operation above 250 °C is not recommended.

Emission spectrum



Range shows different materials including SYA35i, SYB35i, SYC35i, SYF35i and SGA35, SGB35, SGF35, SGG35, GGB35 and others.

90 % QE relative to room temperature



Outer Diameter mm[1]	Inner Diameter mm[1]
88	74
64	50
49	35

Surface quality is specified with
– surface roughness (R_a) smaller than 0.1 µm and
– maximum size of surface defects (scratch/dig) is 60/40 according to MIL-PRF-13830B

[1] Tolerances apply and are available upon request.
[2] Products expected to be phased out by end of 2026.

More details see webpage:
schott.com/ceramic-converter

schott.com

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