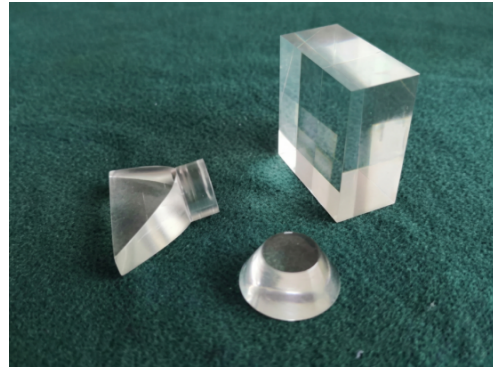


OPTICAL LIGHT GUIDES

SPM100 Light Guide

Product Brochure & Technical Reference

A PMMA light guide for optical transfer and photosensor coupling. This is a passive optical component; define the input and output faces, optical path and mounting geometry.



Reference product image. Shown geometry is illustrative.

Material reference properties / options

Parameter	Value / Option	Engineering Notes
Material	PMMA, polymethyl methacrylate	Optical acrylic material used for visible-light guidance and detector coupling.
Density	1.19 g/cm ³	Consistent with typical cast acrylic / PMMA data.
Refractive index	1.49	Typical visible-light refractive index of PMMA; coupling medium should be selected accordingly.
Manufacturing technique	Casting	Cast PMMA is suitable for machined and polished optical light-guide parts.
Operating temperature	Low-temperature use to -95 C may be reviewed	The original page listed -95 C only. Maximum service temperature, thermal cycling, adhesive, grease and housing stress must be confirmed for the final assembly.

Reference values and options for selection. Confirm the material grade, geometry, test conditions and acceptance criteria for the quoted configuration.

OPTICAL LIGHT GUIDES

Configuration & quotation

Define the component around your application

Application examples: Scintillation detector light collection and optical coupling; PMT, SiPM and photodiode readout assemblies; Plastic scintillator paddles, panels and bars

Additional material reference properties

Parameter	Value / Option	Engineering Notes
Common shapes	Rectangle, cone, fishtail, wedge, strip and custom geometry	Geometry is normally defined by detector area, sensor area and housing constraints.
Surface processing	Optical polishing, edge treatment and coupling-face control	Surface finish and edge quality influence light collection efficiency.
Integration options	Scintillator coupling, wrapping and detector housing support	Can be reviewed together with PMT, SiPM, photodiode or custom readout plans.

Available SPM100 Light Guide Shapes

Shape / Format	Common Use	Design Notes
Rectangular block	Direct coupling between flat scintillator and sensor window	Useful when the input and output areas are similar or when a short optical spacer is needed.
Tapered block	Area transition from scintillator panel to smaller photosensor	Taper angle should be reviewed to reduce avoidable light loss and total internal reflection issues.
Conical guide	Circular PMT or SiPM array coupling	Used when a round sensor window must be matched to a different detector geometry.
Fishtail guide	Wide scintillator strip or panel readout	Helps transition a wide input face to a smaller sensor area in large-area detector designs.
Wedge guide	Space-limited detector housing and angle coupling	Useful when detector mechanics require an offset or angled optical path.
Flat strip / bar	Simple light transport or edge readout	Can be used with plastic scintillator strips, panels or custom readout layouts.
Drawing-defined part	OEM detector module or prototype assembly	Provide CAD drawing, tolerance, polishing, coupling face and packaging requirements for review.

Prepare your quotation

RFQ Item	Information to Provide
Application	Radiation detector, plastic scintillator panel, crystal detector module, PMT/SiPM coupling, automotive lighting or other optical guide use.
Scintillator and sensor	Scintillator material, scintillator size, sensor type, sensor active area and required coupling method.
Geometry	Rectangle, cone, fishtail, wedge, strip, tapered part or custom drawing-defined shape.
Dimensions	Input face, output face, total length, thickness, taper angle, chamfer and tolerance.
Optical processing	Surface polish, edge finish, coupling face quality, wrapping material, optical grease or adhesive requirement.
Operating condition	Temperature range, thermal cycling, vibration, chemical exposure, housing pressure and assembly method.
Order information	Prototype quantity, batch quantity, inspection requirement, packaging and delivery schedule.

Reference values and options for selection. Confirm the material grade, geometry, test conditions and acceptance criteria for the quoted configuration.

Send drawings for engineering review

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