

ILU - 006 series

Appearance



Material : PMMA

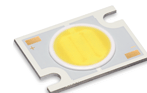
Application

LED Bulb(MR16,GU10,etc...)
LED Down-light , Street Light, others ...

Recommended LED



CL-L251 series



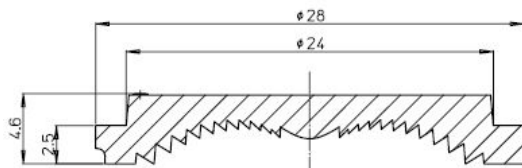
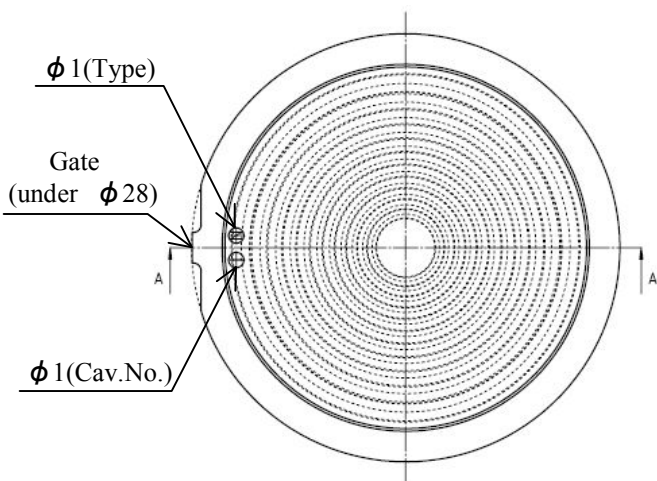
CL-L233 series



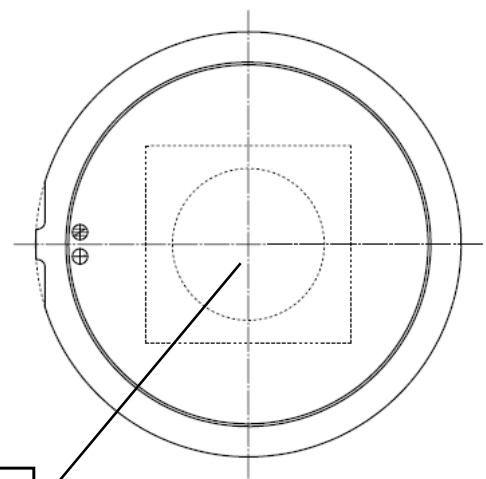
Outline

Unit : [mm]

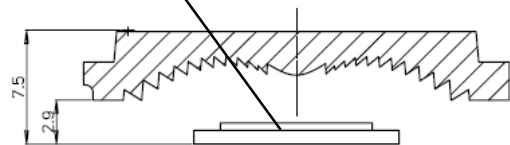
Layout



A-A section



CL-L251



< Attention in the handling >

- To fix the lens, the use of its flange with thickness of 2.5mm is recommended.
- The lens should be placed against the LED "CL-L251" as shown in the figure above.
- The specification is subject to change without notice.
- The prism shape is not accurate.

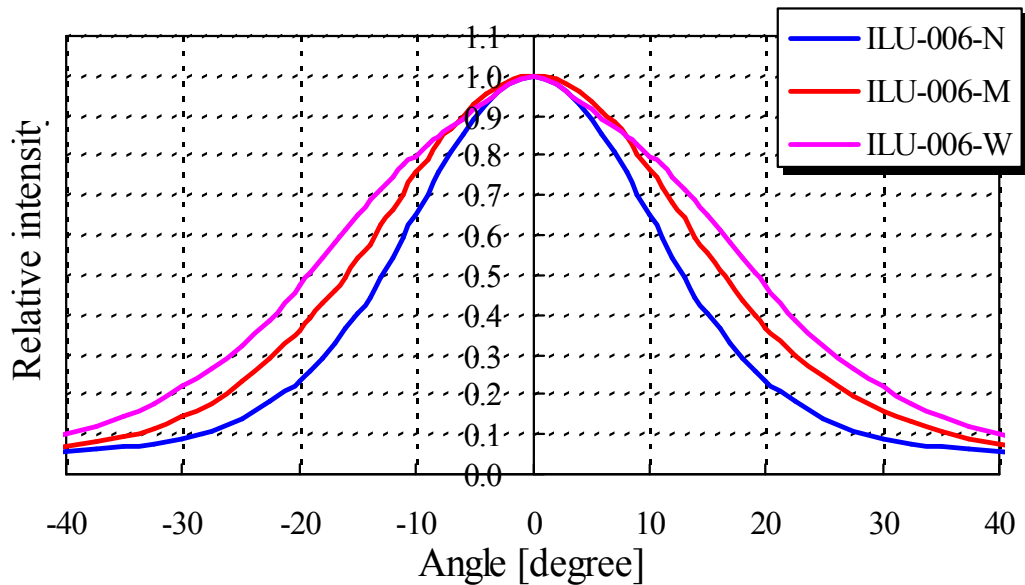
ILU - 006 series

Luminous intensity

With CL-L251 (4W) Series

LED \ Lens	Lens	ILU-006-N FWHM 26[deg]	ILU-006-M FWHM 32[deg]	ILU-006-W FWHM 39[deg]
CL-L251-MC4N1-C	350 [lm]	880 [cd]	540 [cd]	430 [cd]
CL-L251-MC4W1-C	340 [lm]	860 [cd]	520 [cd]	410 [cd]
CL-L251-MC4WW1-C	325 [lm]	820 [cd]	500 [cd]	400 [cd]
CL-L251-MC4L1-C	310 [lm]	780 [cd]	480 [cd]	380 [cd]
CL-L251-MC4L2-C	285 [lm]	720 [cd]	440 [cd]	350 [cd]
CL-L251-HC4N1-C	295 [lm]	740 [cd]	450 [cd]	360 [cd]
CL-L251-HC4W1-C	280 [lm]	700 [cd]	430 [cd]	340 [cd]
CL-L251-HC4L1-C	255 [lm]	640 [cd]	390 [cd]	310 [cd]
CL-L251-C4N1-C	425 [lm]	1070 [cd]	650 [cd]	520 [cd]

Directivity



< Attention in the handling >

- To fix the lens, the use of its flange with thickness of 2.5mm is recommended.
- The lens should be placed against the LED “CL-L251” or “CL-L233” as shown in the figure above.
- The specification is subject to change without notice.

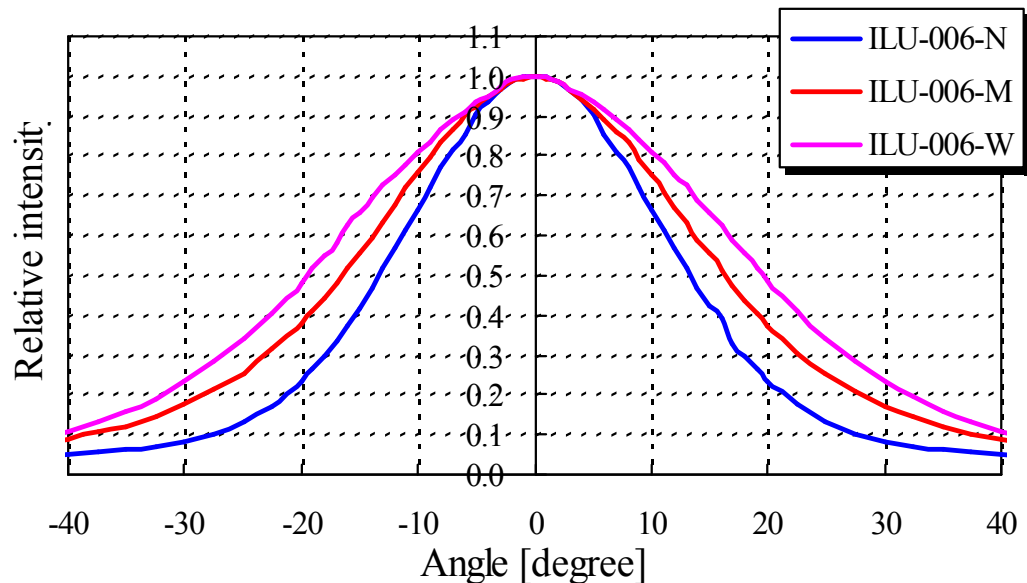
ILU - 006 series

Luminous intensity

With CL-L251 (6W) Series

LED	Lens	ILU-006-N	ILU-006-M	ILU-006-W
		FWHM 26[deg]	FWHM 33[deg]	FWHM 39[deg]
CL-L251-MC6N1-C	490 [lm]	1110 [cd]	730 [cd]	610 [cd]
CL-L251-MC6W1-C	485 [lm]	1100 [cd]	720 [cd]	600 [cd]
CL-L251-MC6WW1-C	455 [lm]	1030 [cd]	680 [cd]	560 [cd]
CL-L251-MC6L1-C	425 [lm]	960 [cd]	630 [cd]	530 [cd]
CL-L251-MC6L2-C	390 [lm]	890 [cd]	580 [cd]	480 [cd]
CL-L251-HC6N1-C	370 [lm]	840 [cd]	550 [cd]	460 [cd]
CL-L251-HC6W1-C	350 [lm]	790 [cd]	520 [cd]	430 [cd]
CL-L251-HC6L1-C	335 [lm]	760 [cd]	500 [cd]	410 [cd]
CL-L251-C6N1-C	625 [lm]	1420 [cd]	930 [cd]	770 [cd]

Directivity



< Attention in the handling >

- To fix the lens, the use of its flange with thickness of 2.5mm is recommended.
- The lens should be placed against the LED “CL-L251” or “CL-L233” as shown in the figure above.
- The specification is subject to change without notice.

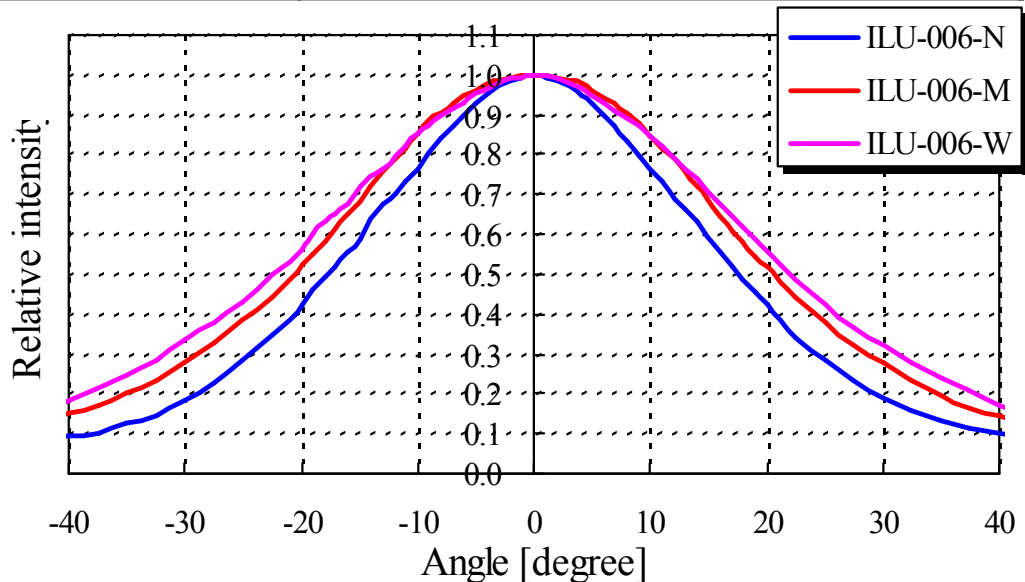
ILU - 006 series

Luminous intensity

With CL-L233 (13W) Series

LED \ Lens	Lens	ILU-006-N FWHM 35[deg]	ILU-006-M FWHM 41[deg]	ILU-006-W FWHM 45[deg]
CL-L233-MC13N1-C	1110 [lm]	1580 [cd]	1220 [cd]	1030 [cd]
CL-L233-MC13W1-C	1055 [lm]	1500 [cd]	1160 [cd]	980 [cd]
CL-L233-MC13WW1-C	1005 [lm]	1430 [cd]	1100 [cd]	930 [cd]
CL-L233-MC13L1-C	960 [lm]	1370 [cd]	1050 [cd]	890 [cd]
CL-L233-MC13L2-C	885 [lm]	1260 [cd]	970 [cd]	820 [cd]
CL-L233-HC13N1-C	890 [lm]	1270 [cd]	980 [cd]	820 [cd]
CL-L233-HC13W1-C	840 [lm]	1200 [cd]	920 [cd]	780 [cd]
CL-L233-HC13WW1-C	805 [lm]	1150 [cd]	880 [cd]	740 [cd]
CL-L233-HC13L1-C	725 [lm]	1030 [cd]	800 [cd]	670 [cd]
CL-L233-HC13L2-C	710 [lm]	1010 [cd]	780 [cd]	660 [cd]
CL-L233-C13N1-C	1410 [lm]	1990 [cd]	1540 [cd]	1300 [cd]

Directivity



< Attention in the handling >

- To fix the lens, the use of its flange with thickness of 2.5mm is recommended.
- The lens should be placed against the LED “CL-L251” or “CL-L233” as shown in the figure above.
- The specification is subject to change without notice.

ILU - 006 series

Physical properties

Property	Test Method	Condition	Unit	Value
Optical				
Light transmission	ASTM D 1003	3.2mm	%	92
Reflective Index	ASTM D 542	N _n @23°C	---	1.49
Mechanical				
Tensile modulus	ISO 527-1 and ISO 527-2	1mm/min	Mpa	(3300)
Tensile strength at yield		50mm/min	Mpa	70
Tensile strain at yield		50mm/min	%	(5)
Nominal tensile strain at break		50mm/min	%	---
Flexual modulus	ISO 178	2mm/min	Mpa	3200
Flexual strength	ISO 178	2mm/min	Mpa	103
Charpy impact strength	ISO 179	Unnoched	kJ/m ²	---
	ISO 179	Noched	kJ/m ²	1.2
Rockwell hardness	ISO 2039-2	M scale	---	93
Thermal				
Heat deflection temperature	ASTM D648	1820kPa	°C	102
		450MPa	°C	---
Vicat softening point	ASTM D1525	(Rate A;1kg)	°C	104
Melt volume flow rate	ISO 1133	230°C , 37.3N	g/10min	(10)
Coefficient of linear expansion	ISO 11359-2	Parallel	x10 ⁻⁴ /k	0.7
		Vertical	x10 ⁻⁴ /k	0.7
Electrical				
Surface resistivity	IEC 60093	---	Ω	>10 ¹⁶
Volume resistivity	IEC 60093	---	Ω m	>10 ¹³
Withstand voltage	IEC 60243-1	short time test	MV/m	(20)
Specific Inductive capacity	IEC 60250	100Hz	---	(3.7)
		1MHz	---	3
Dielectric loss tangent	IEC 60250	100Hz	x10 ⁻⁴	10
		1MHz	x10 ⁻⁴	90
Tracking resistance	IEC 60112	---	---	225
Other				
Density	ISO 1183	---	kg/m ³	1190
Water absorption at 23 °C	ISO 62	In water 24h	%	0.3
Flammability	UL94	---	class	HB

* Values reported are typical and should not be used for specification purpose.

< Attention in the handling >

- The data on this document is the characteristics combining ILU-006 and CL-L251, L233 series.
- ILU-006 is the lens for CL-L251 and L233 series.
- Discussion will be needed separately if you combine it with LEDs other than these.

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