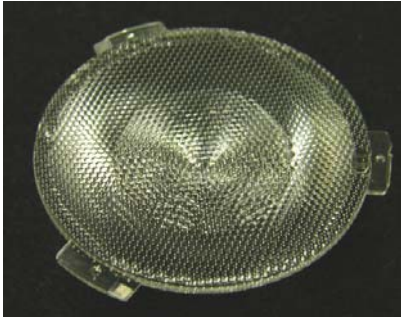


ILU - 008 series

Appearance



Material : PMMA

Application

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

Recommended LED

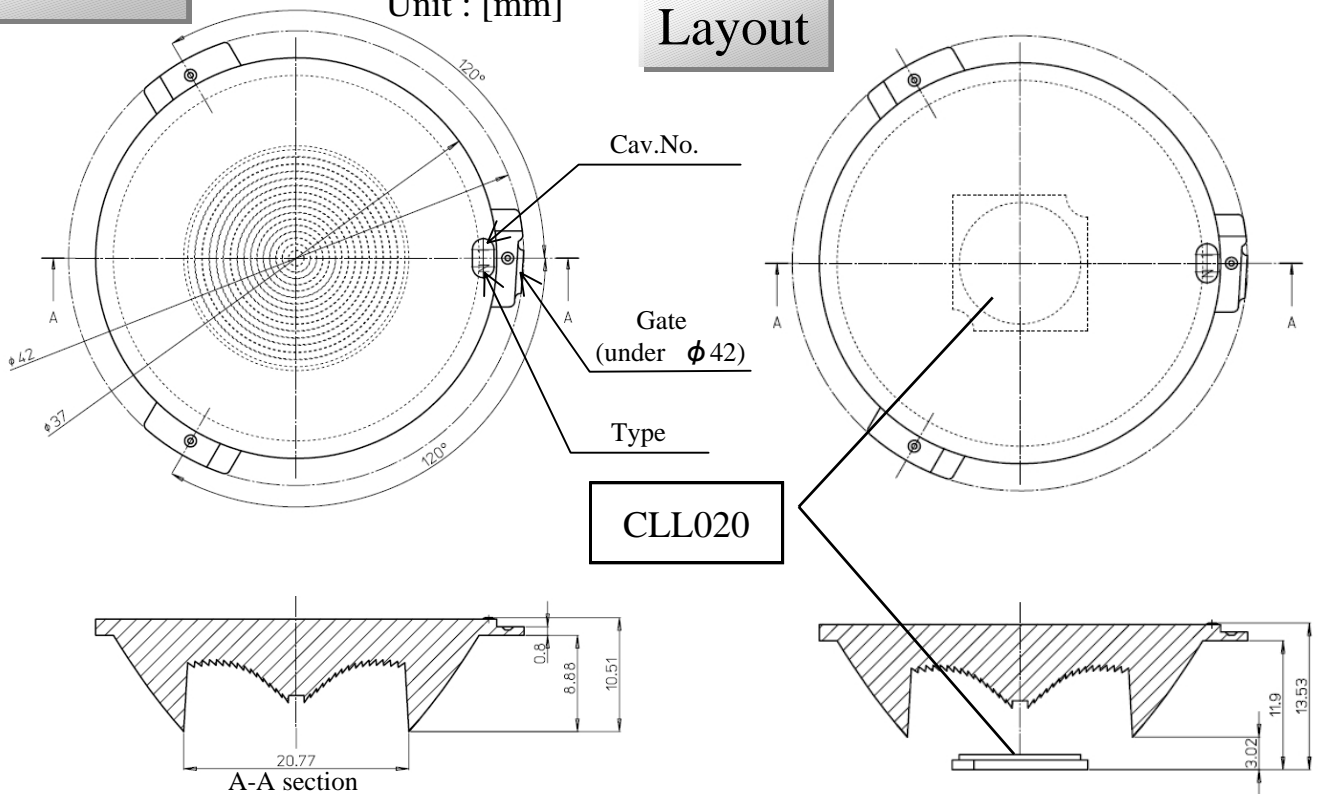
CLL020 series



Outline

Unit : [mm]

Layout



< Attention in the handling >

- To fix the lens, the use of its flange with thickness of 0.8mm is recommended.
- The lens should be placed against the LED “CLL020” as shown in the figure above.
- The specification is subject to change without notice.
- The prism shape is not accurate.
- Do not use this product under the temperature condition exceeding 85°C.

CITIZEN ELECTRONICS CO.,LTD.

Ref.CE-P1808 02/12

ILU - 008 series

Luminous intensity

With CLL020 Series

LED		Lens		ILU-008-N	ILU-008-M	ILU-008-W
LED part code	CCT	Ra	Lumen	FWHM [24deg]	FWHM [30deg]	FWHM [38deg]
CLL020-1202A1-273M1A2	2700[K]	80 Min	155[lm]	546[cd]	343[cd]	248[cd]
			430[lm]	1516[cd]	951[cd]	689[cd]
			770[lm]	2714[cd]	1703[cd]	1233[cd]
CLL020-1202A1-303M1A2	3000[K]	80 Min	165[lm]	582[cd]	365[cd]	264[cd]
			460[lm]	1621[cd]	1017[cd]	737[cd]
			825[lm]	2908[cd]	1825[cd]	1321[cd]
CLL020-1202A1-353M1A2	3500[K]	80 Min	170[lm]	599[cd]	376[cd]	272[cd]
			465[lm]	1639[cd]	1028[cd]	745[cd]
			830[lm]	2926[cd]	1836[cd]	1329[cd]
CLL020-1202A1-403M1A2	4000[K]	80 Min	170[lm]	599[cd]	376[cd]	272[cd]
			470[lm]	1657[cd]	1039[cd]	753[cd]
			840[lm]	2961[cd]	1858[cd]	1345[cd]
CLL020-1202A1-503M1A2	5000[K]	80 Min	175[lm]	617[cd]	387[cd]	280[cd]
			490[lm]	1727[cd]	1084[cd]	785[cd]
			870[lm]	3067[cd]	1924[cd]	1393[cd]
CLL020-1202A1-50KL1A1	5000[K]	65 Typ	205[lm]	723[cd]	453[cd]	328[cd]
			570[lm]	2009[cd]	1261[cd]	913[cd]
			1020[lm]	3595[cd]	2256[cd]	1633[cd]

< Attention in the handling >

- To fix the lens, the use of its flange with thickness of 0.8mm is recommended.
- The lens should be placed against the LED “CLL020” as shown in the figure above.
- The specification is subject to change without notice.
- Do not use this product under the temperature condition exceeding 85°C.

CITIZEN ELECTRONICS CO.,LTD.

Ref.CE-P1808 02/12

ILU - 008 series

Luminous intensity

With CLL020 Series

LED		Lens		ILU-008-N	ILU-008-M	ILU-008-W
LED part code	CCT	Ra	Lumen	FWHM [24deg]	FWHM [30deg]	FWHM [38deg]
CLL020-1203A1-273M1A2	2700[K]	80 Min	230[lm]	811[cd]	509[cd]	368[cd]
			635[lm]	2238[cd]	1404[cd]	1017[cd]
			1130[lm]	3983[cd]	2499[cd]	1810[cd]
CLL020-1203A1-303M1A2	3000[K]	80 Min	245[lm]	864[cd]	542[cd]	392[cd]
			675[lm]	2379[cd]	1493[cd]	1081[cd]
			1210[lm]	4265[cd]	2676[cd]	1938[cd]
CLL020-1203A1-353M1A2	3500[K]	80 Min	245[lm]	864[cd]	542[cd]	392[cd]
			685[lm]	2415[cd]	1515[cd]	1097[cd]
			1220[lm]	4300[cd]	2698[cd]	1954[cd]
CLL020-1203A1-403M1A2	4000[K]	80 Min	250[lm]	881[cd]	553[cd]	400[cd]
			690[lm]	2432[cd]	1526[cd]	1105[cd]
			1235[lm]	4353[cd]	2731[cd]	1978[cd]
CLL020-1203A1-503M1A2	5000[K]	80 Min	260[lm]	916[cd]	575[cd]	416[cd]
			715[lm]	2520[cd]	1581[cd]	1145[cd]
			1280[lm]	4512[cd]	2831[cd]	2050[cd]
CLL020-1203A1-50KL1A1	5000[K]	65 Typ	300[lm]	1057[cd]	663[cd]	480[cd]
			835[lm]	2943[cd]	1847[cd]	1337[cd]
			1495[lm]	5270[cd]	3306[cd]	2394[cd]

< Attention in the handling >

- To fix the lens, the use of its flange with thickness of 0.8mm is recommended.
- The lens should be placed against the LED “CLL020” as shown in the figure above.
- The specification is subject to change without notice.
- Do not use this product under the temperature condition exceeding 85°C.

ILU - 008 series

Luminous intensity

With CLL020 Series

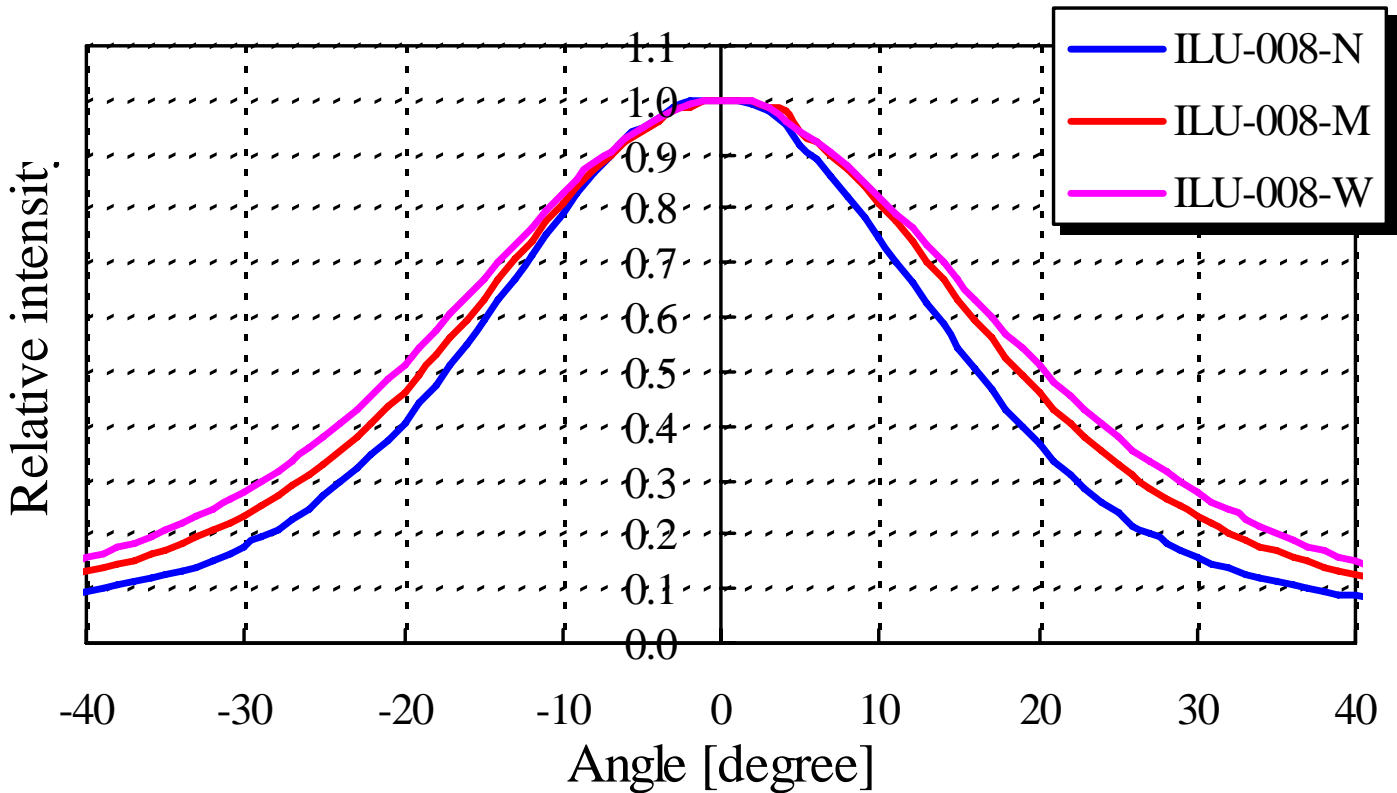
LED		Lens		ILU-008-N	ILU-008-M	ILU-008-W
LED part code	CCT	Ra	Lumen	FWHM [24deg]	FWHM [30deg]	FWHM [38deg]
CLL020-1204A1-273M1A2	2700[K]	80 Min	300[lm]	1057[cd]	663[cd]	480[cd]
			835[lm]	2943[cd]	1847[cd]	1337[cd]
			1490[lm]	5252[cd]	3295[cd]	2386[cd]
CLL020-1204A1-303M1A2	3000[K]	80 Min	320[lm]	1128[cd]	708[cd]	512[cd]
			890[lm]	3137[cd]	1968[cd]	1425[cd]
			1595[lm]	5622[cd]	3528[cd]	2554[cd]
CLL020-1204A1-353M1A2	3500[K]	80 Min	325[lm]	1146[cd]	719[cd]	520[cd]
			900[lm]	3172[cd]	1990[cd]	1441[cd]
			1610[lm]	5675[cd]	3561[cd]	2578[cd]
CLL020-1204A1-403M1A2	4000[K]	80 Min	330[lm]	1163[cd]	730[cd]	528[cd]
			910[lm]	3208[cd]	2013[cd]	1457[cd]
			1625[lm]	5728[cd]	3594[cd]	2602[cd]
CLL020-1204A1-503M1A2	5000[K]	80 Min	340[lm]	1198[cd]	752[cd]	544[cd]
			945[lm]	3331[cd]	2090[cd]	1513[cd]
			1685[lm]	5940[cd]	3727[cd]	2698[cd]
CLL020-1204A1-50KL1A1	5000[K]	65 Typ	400[lm]	1410[cd]	885[cd]	641[cd]
			1105[lm]	3895[cd]	2444[cd]	1770[cd]
			1970[lm]	6944[cd]	4357[cd]	3155[cd]

< Attention in the handling >

- To fix the lens, the use of its flange with thickness of 0.8mm is recommended.
- The lens should be placed against the LED “CLL020” as shown in the figure above.
- The specification is subject to change without notice.
- Do not use this product under the temperature condition exceeding 85°C.

ILU - 008 series

Directivity



< Attention in the handling >

- To fix the lens, the use of its flange with thickness of 0.8mm is recommended.
- The lens should be placed against the LED “CLL020” as shown in the figure above.
- The specification is subject to change without notice.
- Do not use this product under the temperature condition exceeding 85°C.

ILU - 008 series

Physical properties

Property	Test Method	Condition	Unit	Value
Optical				
Light transmission	ASTM D 1003	3.2mm	%	92
Reflectiv Index	ASTM D 542	ND@23°C	---	1.49
Mechanical				
Tensile modulus	ASTM D 638		MPa	3100
Tensile strength at yield	ASTM D 790	Max.	MPa	70
Nominal tensile strain at break	ASTM D 638	---	%	6
Flexual modulus	ASTM D 790	---	MPa	3200
Flexual strength	ASTM D 790	---	MPa	103
Charpy impact strength	ASTM D 256			7.5
Izod impact strength	ASTM D 256	Noched (23°C)	kJ/m ²	1.2
Rockwell hardness	ASTM D 785	M scale	---	93
Thermal				
Heat deflection temperature	ASTM D 648	1820kPa	°C	102
Vicat softening point	ASTM D 1525	(Rate A;1kg)	°C	111
		(Rate A;5kg)	°C	104
Melt volume flow rate	ASTM D 1238	---	g/10min	3.7
Coeffient of linear expansion	ASTM D 696	---	× 10 ⁻⁵	5.8
Electrical				
Surface resistivity	ASTM D 257	---	Ω /sq	1.00E+18
Volume resistivity	ASTM D 257	---	Ω cm	1.00E+18
Specific Inductive capacity	ASTM D 150	60cycles	---	3.7
		1,000,000cycles	---	2.2
Dielectric strength	ASTM D 149	volts/mil		500
Dielectric loss Factor	ASTM D 150	60cycles		0.19
		1,000,000cycles		0.007
Tracking resistance	ASTM D 405	---	seconds	no track
Other				
Density	ASTM D 792	---	g/cm ³	1.19
Water absorption	ASTM D 570	---	%	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-008 and CLL020 series.
- ILU-008 is the lens for CLL020 series.
- Discussion will be needed separately if you combine it with LEDs other than these.
- The specification is subject to change without notice.
- Do not use this product under the temperature condition exceeding 85°C.

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