



2025-10



Asahi Crosslink

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AL-20M-DUV280

Product Datasheet

Properties

LED Compatibility [distribution angle 20°±]

6.80×6.80mm, flat top

UV-C | UV-B

Material: DUV280 Clear Silicone

A50 hardness

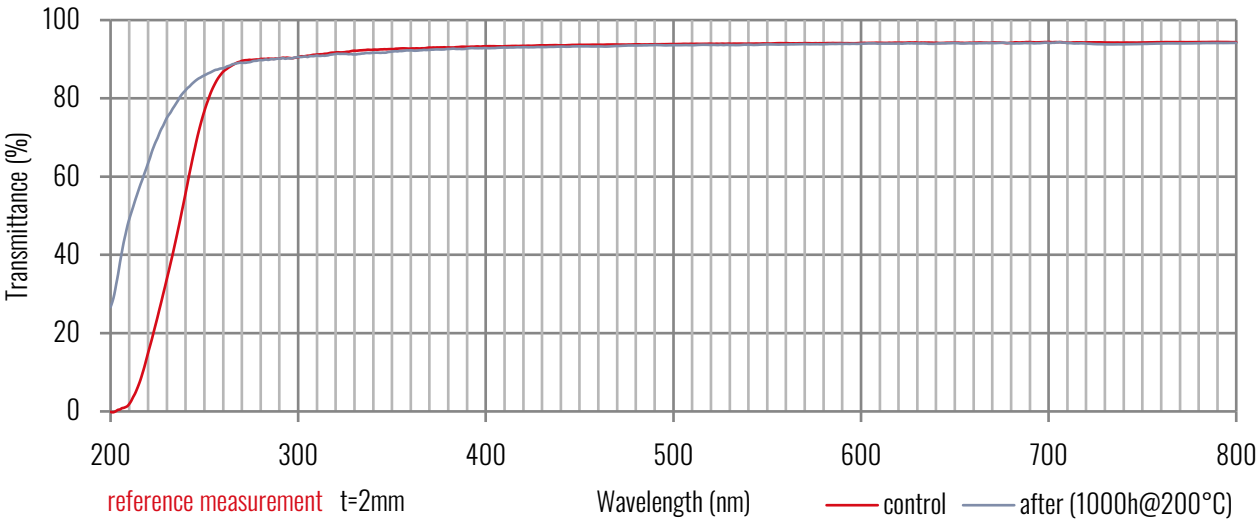
ROHS3 Compliant

Refractive index 1.40
(25°C, D-line 589nm)

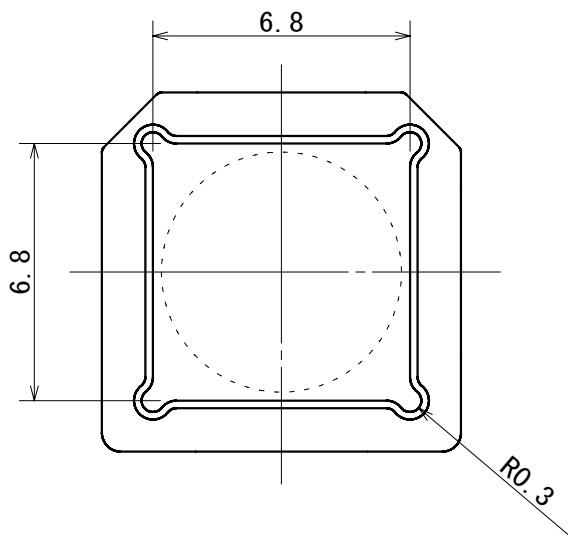
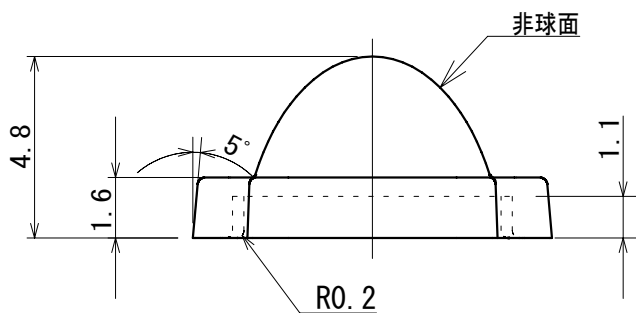
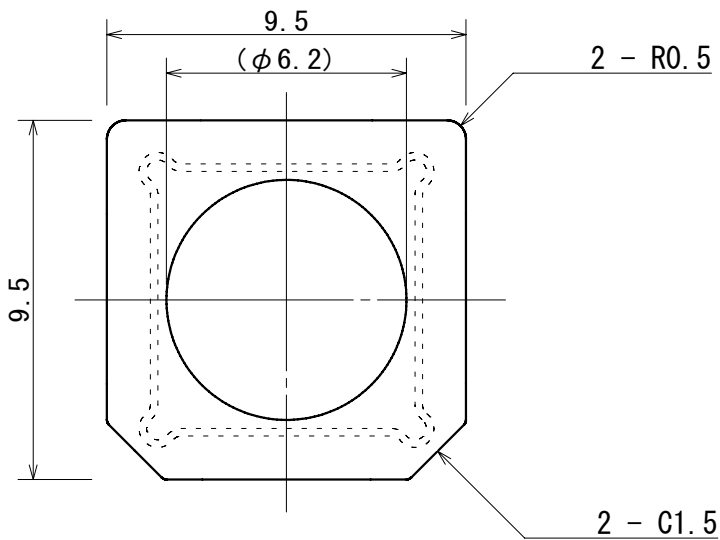
REACH Unaffected



Test Type	Test Method	Test Conditions	Period	Appearance	280nm Transmittance Post-Test (t=2mm)
Thermal Shock	-	-40°C > 100°C 15min 15min	100 cycles	No cracks or other defects	84.5%
High Temperature Storage	JEITA ED-4701 200 201	Ta=150°C	1,000hr	No cracks or other defects	82.7%
Humidity Resistance	-	Ta=30°C RH=60%	1,000hr	No cracks or other defects	83.5%
Low Temperature Storage	JEITA ED-4701 200 202	Ta=-40°C	1,000hr	No cracks or other defects	88.4%
Solvent Resistance	JEITA ED-4701 500 501	Solvent: IPA 23±5°C, 5min	1 time	No cracks or other defects	89.1%
High Temperature Resistance	-	Ta=200°C	500hr	No cracks or other defects	89.1%



1		2		3		4 [C / P]		CAD ZRD
○	SPECIFICATIONS ＜仕様図＞	SURFACE TREATMENT ＜表面処理＞	SYM	DATE	REVISION	REVR	APPR	
	REFERENCE ＜参考図＞	HEAT TREATMENT ＜熱処理＞	1 x					
		FINISH ＜仕上げ＞	2 x					
			3 x					



NOTE)

- ・指示なき公差：C適用
- ・推奨LEDサイズ 6.8×6.8mm
- ・レンズ曲率は参考形状となります。

TOLERANCE UNLESS SPECIFIED				ORIGINAL DATE	MATERIAL (COMPOUND)	TITLE			
RANGE	A	B	C	2021/12/23	シリコーン	AL-20M-DUV280			
LESS THAN 6	±0.2	±0.1	±0.1	SCALE	COLOR	DRAWING NO.			
OVER 6 TO 20	±0.3	±0.2	±0.1	5 : 1	透明	21122301T			
OVER 20 TO 50	±0.5	±0.3	±0.2	SIZE	HARDNESS	DESIGN	DRAWN	CHECKED	APPROVED
OVER 20 TO 100	±1.0	±0.5	±0.3	A4	—	S. Tonegawa	S. Tonegawa	T. Kanahira	M. Tasaki
OVER 100 TO 300	±2.0	±1.0	±0.5	 ASAHI RUBBER INC. 株式会社朝日ラバー					
OVER 300 TO 500	±5.0	±2.5	±1.0						
ANGLE	±2°								



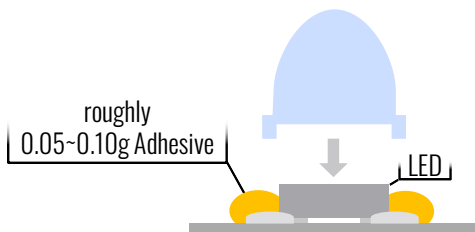
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Attachment Guide

1. Lens to PCB Adhesion



Ensure no floating or tilting of lens before curing
Recommended for opaque or room temp-curing adhesives

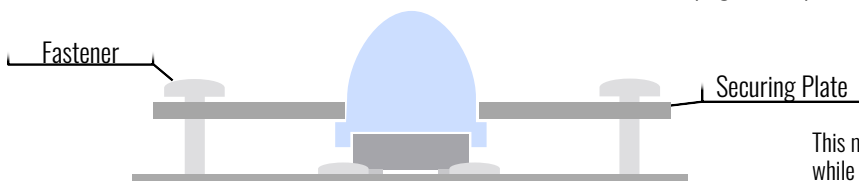
Ensure your selected adhesive:

- Is silicone based
- Has low siloxane levels
- Has high viscosity
- Has appropriate strength
- Is compatible with your processes
- Is suitable for the UV environment or is protected from the irradiation

2. Mechanical

Secure a plate with a hole of ~5% larger diameter than the lens optic, fitted over the lens

Care must be taken to ensure no scraping or other physical damage to the lens optic when mounting



This method allows easier lens replacement while preserving the LED, where desired

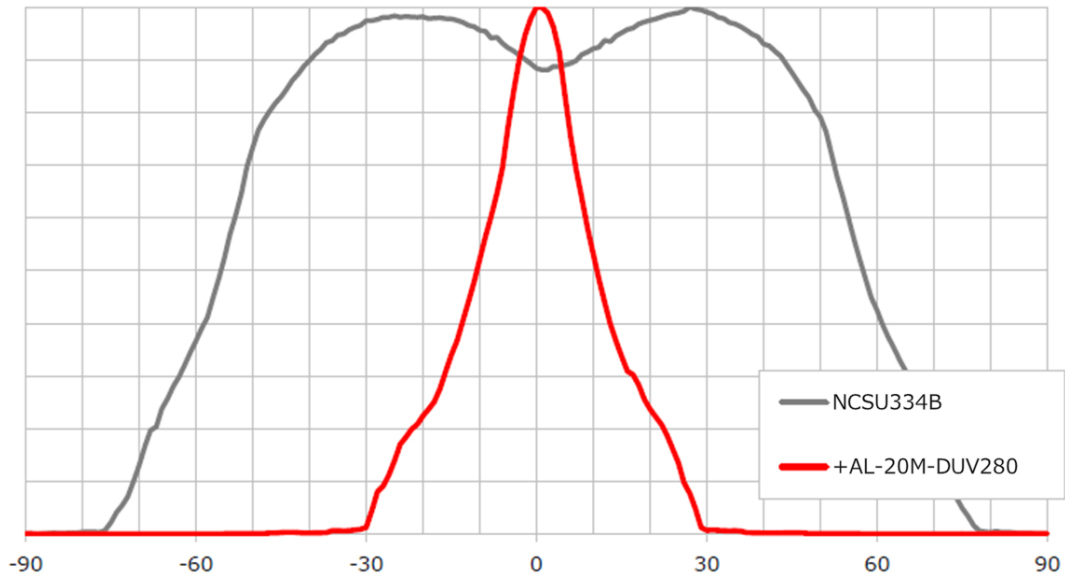


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Photometrics



Directivity with NCSU334B ~20°

Silicone Resin (DUV280) UV Durability Testing

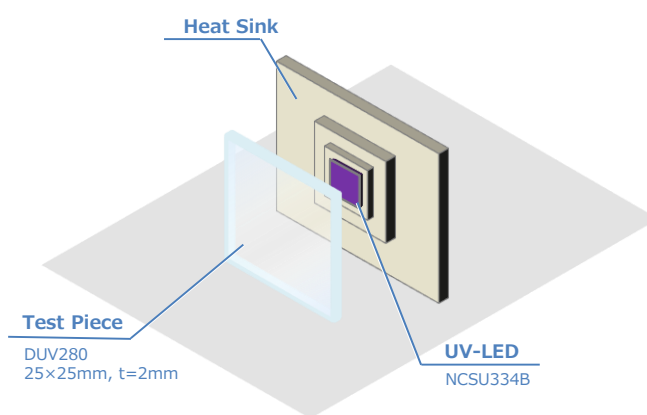
Test Method

UV-LED lit for extended duration; collected pre- and post-test transmittance data compared.

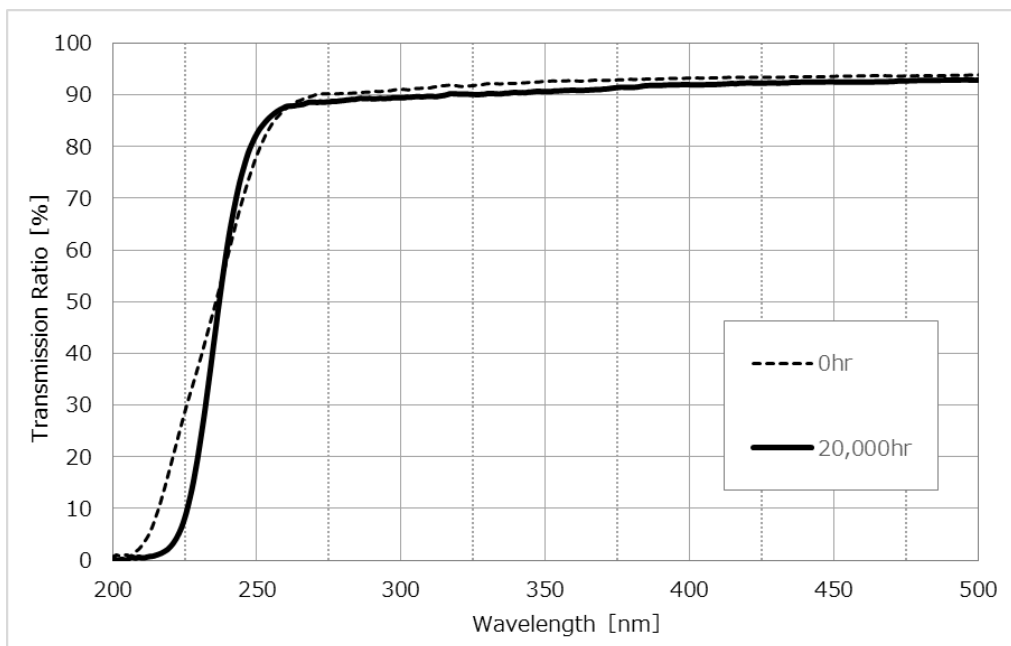
Continuous Operation Test Description

LED Package	Nichia NCSU334B (@280nm)
Drive Current	$I_F = 500\text{mA}$ (specification max)
Radiant Flux	$\Phi_e = 70\text{mW}$ (@350mA)
Cooling	Heat sink with forced air
Ambient Temp	$T_A = 25^\circ\text{C}$
Duration	20,000 hours
Distance	~2mm between LED and test piece

Test Illustration



Measured Results (Change in Transmittance after 20,000hr)



Summary

No abnormal appearance (damage, cracks, discoloration, etc.) was confirmed after the test.