



2025-10

AL-10M-DUV280

Product Datasheet

Properties

LED Compatibility [distribution angle 10°±]

3.50×3.50mm, flat top

UV-C | UV-B

Material: DUV280 Clear Silicone

A50 hardness

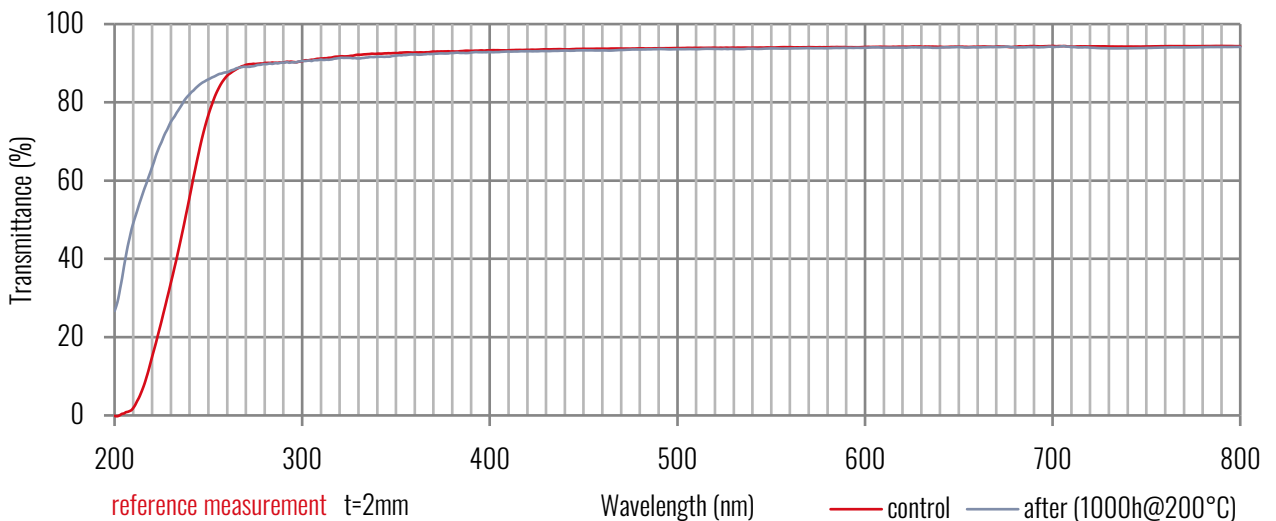
ROHS3 Compliant

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

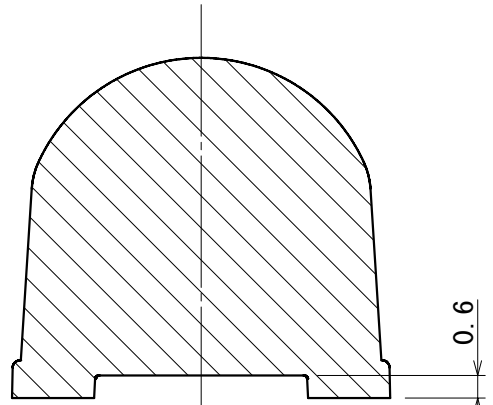
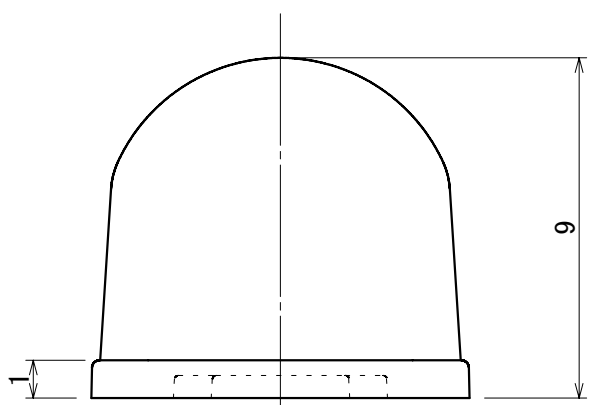
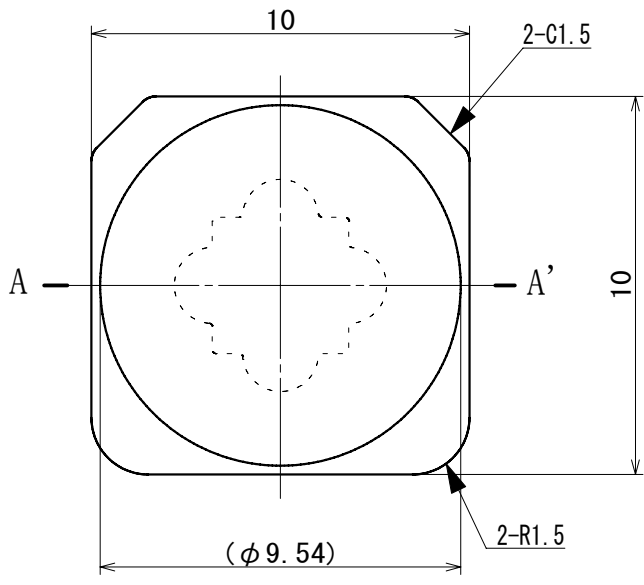
REACH Unaffected



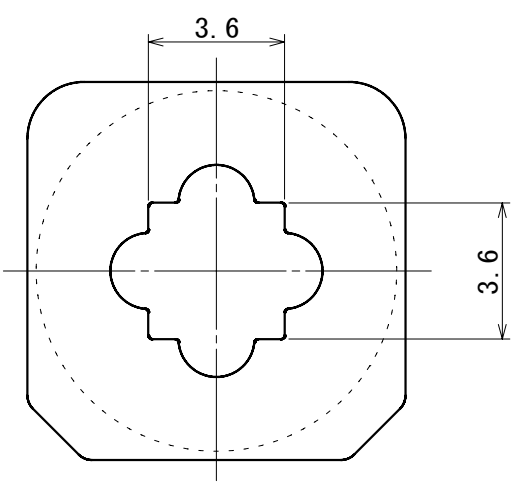
Test Type	Test Method	Test Conditions	Period	Appearance	280nm Transmittance Post-Test (t=2mm)
Thermal Shock	-	-40°C > 100°C 15min 15min	100 cycles	No cracks or other defects	84.5%
High Temperature Storage	JEITA ED-4701 200 201	Ta=150°C	1,000hr	No cracks or other defects	82.7%
Humidity Resistance	-	Ta=30°C 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%



○ SPECIFICATIONS <仕様図>	SURFACE TREATMENT <表面処理>	SYM	DATE	REVISION		REVR	APPR
	HEAT TREATMENT <熱処理>	△ x					
	FINISH <仕上げ>	△ x					
REFERENCE <参考図>		△ x					



A-A' 断面



NOTE)
 ・指示なき公差：C適用
 ・推奨LEDサイズ 3.5×3.5mm
 ・レンズ曲率は参考形状となります。

100
90
80
70
60
50
40
30
20
10
0

TOLERANCE UNLESS SPECIFIED				ORIGINAL DATE 2021/12/23	MATERIAL (COMPOUND) シリコーン	TITLE AL-10M-DUV280				
RANGE	A	B	⊙	SCALE 5:1	UNIT mm	COLOR 透明	DRAWING NO. 21122301M			
LESS THAN 6	±0.2	±0.1	±0.1	SIZE A4	3RD ANGLE SYSTEM	HARDNESS —	DESIGN	DRAWN	CHECKED	APPROVED
OVER 6 TO 20	±0.3	±0.2	±0.1	ASAHIRUBBER INC. 株式会社朝日ラバー		T. Motoyanagi T. Motoyanagi T. Kanahira M. Tasaki				
OVER 20 TO 50	±0.5	±0.3	±0.2							
OVER 50 TO 100	±1.0	±0.5	±0.3							
OVER 100 TO 300	±2.0	±1.0	±0.5							
OVER 300 TO 500	±5.0	±2.5	±1.0							
ANGLE	±2°									

Drawing Paper for Rubber Parts



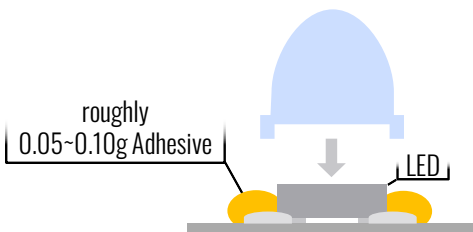
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Attachment Guide

1. Lens to PCB Adhesion



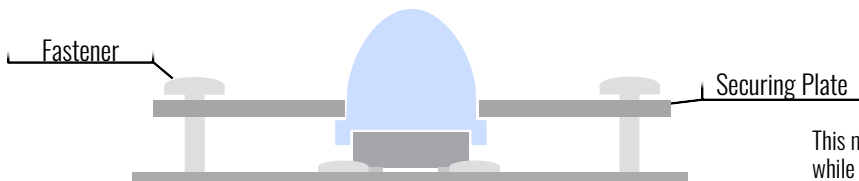
Ensure no floating or tilting of lens before curing
Recommended for opaque or room temp-curing adhesives

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

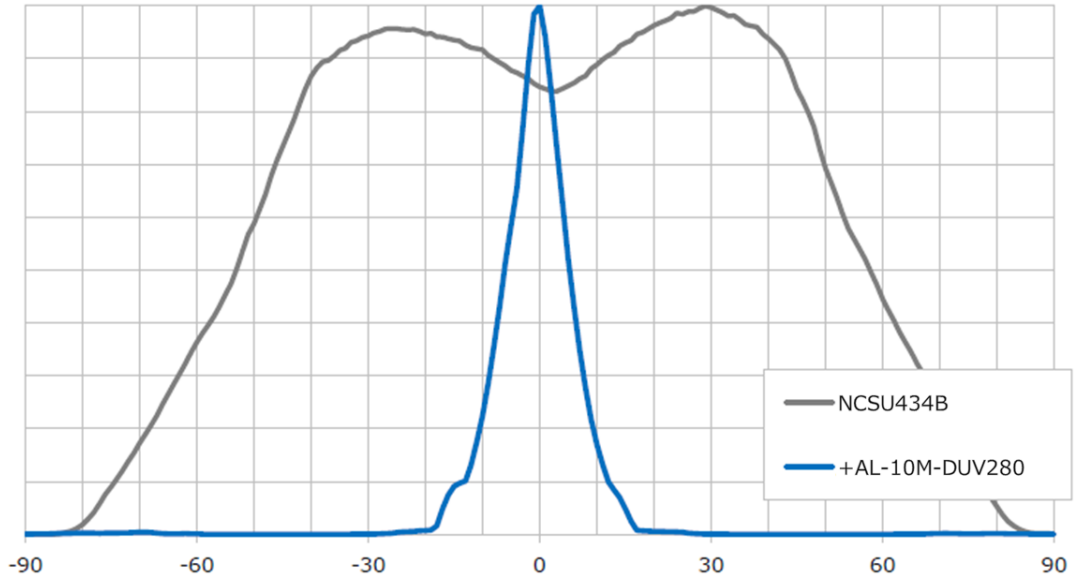


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Photometrics



Directivity with NCSU434B $\sim 10^\circ$

Silicone Resin (DUV280) UV Durability Testing

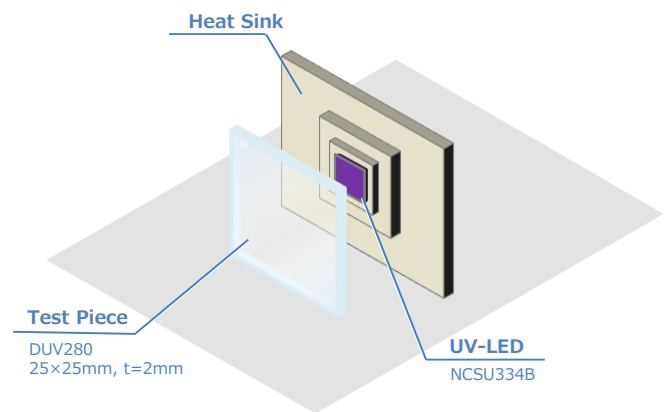
Test Method

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

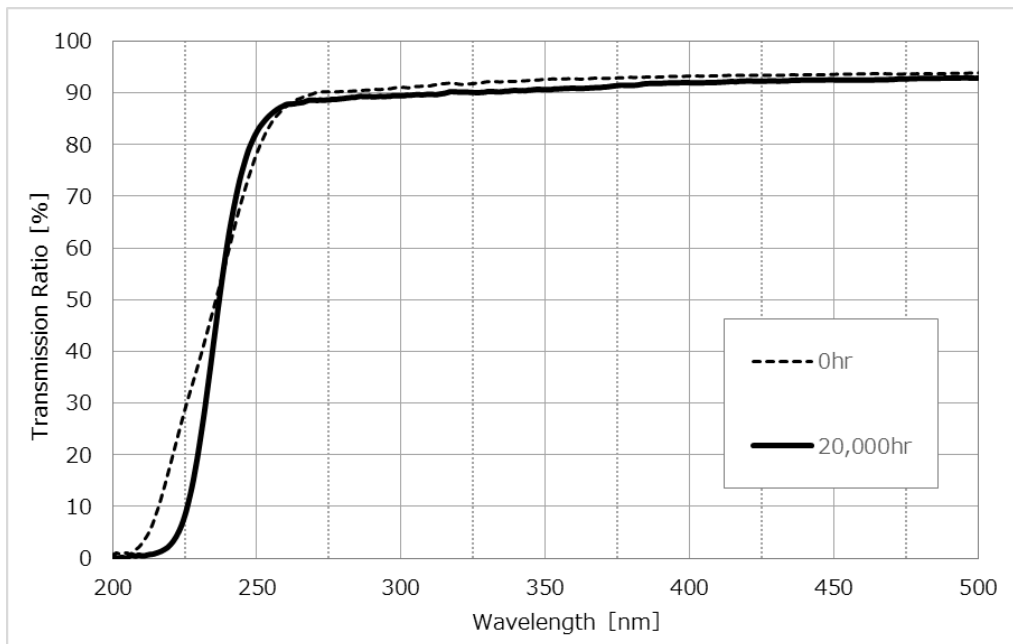
Continuous Operation Test Description

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.