

TECHSPEC® 50.8mm Dia., 4mm Thick, NIR I Coated $\lambda/4$ N-BK7 Window

#15-442



해당 제품은 산업 및 저출력 레이저 어플리케이션에 적합합니다. 공차가 높도록 설계되어 빔 왜곡과 산란을 최소화합니다. 광대역 코팅 옵션 선택 시 이러한 정밀 윈도우의 파장 대역이 가시광선(VIS)부터 근적외선(NIR)에 이르는 스펙트럼으로 확장됩니다. 또한, 2 - 200mm 크기의 원형/정사각형 제품으로 제공됩니다.

참고: 해당 제품군에 새로 추가된 제품은 사양에 표면 평탄도 대신 투과 파면 왜곡(TWD)이 명시될 수 있습니다. 두 사양의 차이점에 관한 자세한 내용은 어플리케이션 노트 중 ['Understanding Optical Windows\(광학 윈도우 이해하기\)'](#)를 확인하세요.

General

Type: Protective Window

Physical & Mechanical Properties

Bevel:	Protective as needed
Clear Aperture (%):	90
Clear Aperture CA (mm):	45.72
Diameter (mm):	50.80 +0.0/-0.25
Thickness (mm):	4.00 ±0.20
Edges:	Fine Ground
Knoop Hardness (kg/mm ²):	610
Parallelism (arcmin):	<1
Poisson's Ratio:	0.206
Young's Modulus (GPa):	82

Optical Properties

Abbe Number (v_d):	64.17
Coating:	NIR I (600-1050nm)
Coating Specification:	$R_{avg} \leq 0.5\%$ @ 600 - 1050nm
Index of Refraction (n_d):	1.516
Substrate:	N-BK7
Surface Flatness (P-V):	$\lambda/4$
Surface Quality:	60-40
Wavelength Range (nm):	600 - 1050
Damage Threshold, By Design:	7 J/cm ² @ 1064nm, 10ns

Material Properties

Coefficient of Thermal Expansion CTE (10 ⁻⁶ /°C):	7.1 (-30 to +70°C)
	8.3 (+20 to +300°C)
Density (g/cm ³):	2.51



June 22, 2025

To Whom It May Concern,

This document certifies that the product stated below has been reviewed as requested by Edmund Optics:

재고 번호	제품설명
15-442	50.8mm Dia., 4mm Thick, NIR I Coated $\lambda/4$ N-BK7 Window

This item is EU RoHS (2015/863/EU) compliant without the use of exemptions.

This certification means that:

- EO's suppliers have confirmed the material composition of this product.
- EO has implemented rigorous procedures to document this compliance.
- The information provided may, or may not, be based upon actual test data, or on information from our Vendors, Raw Material Suppliers or Subcontractors.



Jay Budd, Director of Corporate Compliance

June 22, 2025

Edmund Optics Inc. - 101 E Gloucester Pike, Barrington, NJ 08007 | 1-800-363-1992 | Compliance@edmundoptics.com



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15-442	50.8mm Dia., 4mm Thick, NIR I Coated $\lambda/4$ N-BK7 Window

Edmund Optics certifies that all articles included in this shipment are in compliance with the terms and conditions of this order. The company also certifies that the articles included in this shipment are in accordance to all agreed upon specifications and quality assurance provisions. Please call 1-800-363-1992 should any questions arise from this shipment.



Jeff Harvey- EVP of Operations



June 22, 2025

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This item does not contain any of the substances listed on the Reach SVHC list as of 14 June 2023 in quantities exceeding 0.1% weight by weight.

Please note the following:

- Entry 11 of Annex V of the REACH regulation EC 1907/2006 as amended by regulation 987/2008, exempts "non-hazardous" glass components from registration.
- Items considered to be packing materials and which do not form part of, or are not required for the operation of, the product, are not considered to be within scope of this declaration.
- EO does not routinely analyze products for substances not purposely added or specified within the design specifications, drawings and assembly procedures.

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Jay Budd, Director of Corporate Compliance
June 22, 2025

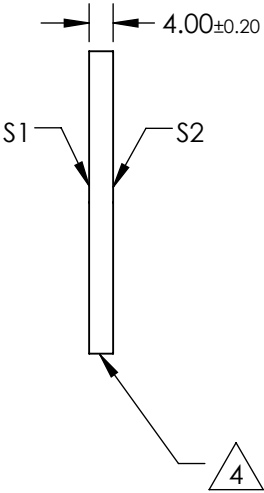
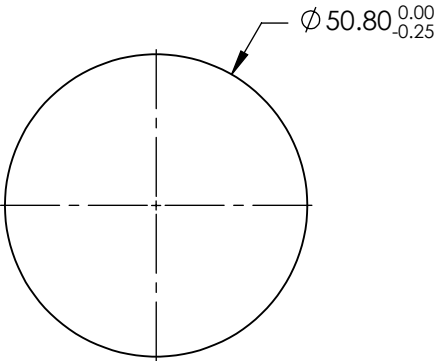
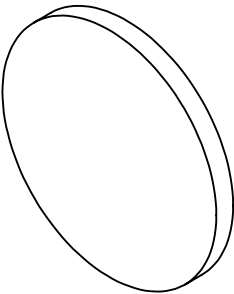
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NOTES:

- 1. SUBSTRATE: N-BK7
- 2. S2 TO BE PARALLEL WITH S1 TO < 1ARCMIN
- 3. COATING (APPLY ACROSS CLEAR APERTURE)
S1 & S2: R(AVG) ≤0.5% @ 600 - 1050nm


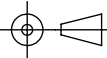
4. FINE GRIND SURFACE

5. RoHS COMPLIANT



**FOR INFORMATION ONLY:
DO NOT MANUFACTURE
PARTS TO THIS DRAWING**

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
DIMENSIONS ARE FOR REFERENCE ONLY

		S1	S2				 Edmund Optics®	
SHAPE		PLANO	PLANO		TITLE		50.8mm DIA., 4mm THICK, NIR I COATED λ/4 N-BK7 WINDOW	
SURFACE QUALITY		60-40	60-40		DWG NO		15442	
CLEAR APERTURE (mm)		Ø45.72	Ø45.72				SHEET 1 OF 1	
BEVEL		PROTECTIVE AS NEEDED	PROTECTIVE AS NEEDED		ALL DIMS IN	mm		