

# M² Test Protocol

**General Information:** test has been performed in accordance with ISO 11146.

Date (MM-DD-YYYY)05-08-2026                      Time:                      11:35:50

**Information Concerning Testing and Evaluation:**

Thorlabs Beam, Version 9.1.5787.560  
Measurement MethodClip Level at 1/e²  
Serial Number:            M00280451  
Wavelength:              1064 nm  
Min. Data Points:        10

Model:                      BP209-VIS  
Profilr Azimuth Angle:  
Scan Range:              0.00 - 200.00 mm

**After Lens Results:**

Parameter:	Result:	Unit:
M² Value X'	1.17	
M² Value Y'	1.15	
Rayleigh Length X'	29.29	mm
Rayleigh Length Y'	29.81	mm
Waist Diameter X'	215.18	µm
Waist Diameter Y'	215.64	µm
Waist Asymmetry	1.00	
Waist Position X'	126.02	µm
Waist Position Y'	127.59	µm
Astigmatism	1.57	mm
Relative Astigmatism	0.05	
Full Divergence Angle X'	0.42	°
Full Divergence Angle Y'	0.41	°
Divergence Asymmetry	0.98	

**Original Waist Results:**

Parameter:	Result:	Unit:
M² Value X'	1.17	
M² Value Y'	1.15	
Rayleigh Length X'	1640.75	mm
Rayleigh Length Y'	1552.60	mm
Waist Diameter X'	1610.39	µm
Waist Diameter Y'	1556.16	µm
Waist Asymmetry	0.97	
Waist Position X'	1240.27	µm
Waist Position Y'	1254.32	µm
Astigmatism	14.04	mm
Relative Astigmatism	0.01	
Full Divergence Angle X'	0.06	°
Full Divergence Angle Y'	0.06	°
Divergence Asymmetry	0.02	

