



Unit 29, Riverside Business Centre, Victoria Street, High Wycombe, HP11 2LT, UK



Certificate of Conformance of ELODIZ Intensity Calibration NIR LED Light Source

Product name	NIR intensity calibration LED source
Model Number	ELO-9002-A
Serial Number	CJY712
ELODIZ DocID certificate Number	6Ar5Gk1A_NIR_LED_C_CJY712_Cert

The ELODIZ near infrared intensity calibration LED source is produced for its use as a reference light source for spectroscopy devices in standard laboratory conditions only. **This reference light source is a secondary calibration standard which is based upon NIST 2241 standard.** The ELODIZ near infrared intensity calibration LED source identified above has been evaluated to be in conformance to all applicable tests for this product to match our operational specifications. The data and the results of the test are documented in the completed factory test report and summarized in this conformance certificate; a full copy of the results can be obtained by request to ELODIZ.

This document certifies that the identified product meets applicable factory specifications and accepted international standards for intensity calibration light sources. This certificate is emitted based on the test results obtained in our manufacturing and test protocols: 6Ar5Gk6 and 6Ar5Gk3C_LED_NIR_C_CJY712.

Spectral range of interest of ELODIZ intensity calibration LED source corresponds to the calibration function:

$$Y(x, \text{cm}^{-1}) = A0 + A1*x + A2*x^2 + A3*x^3 + A4*x^4 + A5*x^5$$

A0	A1	A2	A3	A4	A5
2.94901162e-01	1.44165865e-03	-1.79638791e-06	1.21060045e-09	-3.76840088e-13	4.18914219e-17

An ELODIZ manufacturing sticker reflecting the conformance is applied to the device, next to the Unique Serial Number assigned to this product. The manufacturing date on the device applies for the first validation period. Following recertifications of the unit will require new stickers and certificates.

Range, cm⁻¹ (with respect to the 785 nm line)	200 to 3200
Reference source	NIR-C
Mean relative error, %	0.106 %
Final Disposition	PASS
Certification Date	10/07/2024
Certification Expiration	3 years from manufacturing or 250h of use

Spectral shift, cm ⁻¹	Relative error, %	Spectral shift, cm ⁻¹	Relative error, %	Spectral shift, cm ⁻¹	Relative error, %
201	11.65	1501	0.425	3001	-0.250
501	-0.0099	2001	0.196	3200	-6.039
1001	-0.045	2501	0.293		

Performed by: Muhammad Faizan

Title: Development Engineer

Signature: *Muhammad Faizan*

Date: 10/07/2024