INFOSHEET

CEPRO®
LEADING IN WELDING SAFETY

LASER SAFETY WINDOW P1H09 (3 MM)

Prof. Dr.-Ing. Peter Hoffmann
Öffentlich bestellter und vereidigter
Sachverständiger
Lasertechnik / Lasermaterialbearbeitung

Wilhelmshavener Str. 24a
90425 Nürnberg

Certificate

No. LV-033/R01

Passive laser guard material P1H09, 3.0 mm

complies with the standard
Safety of laser products - Part 4: Laser guards (IEC 60825-4:2006 + A1:2008 + A2:2011);
German version EN 60825-4:2006 + A1:2008 + A2:2011

Parameters of conducted tests:

Wave length λ:	[nm]	1080
Laser power P_a:	[W]	326
Operating mode:		Contin. Wave
Beam diameter d_{86}:	[mm]	50
Duration of exposure:	[s]	150
Test report:		011-2021

Permissible limits (70% safety factor included):

Range of wave length λ:	[nm]	897–960	960–1190
Protective exposure limit (PEL):	[W/m²]	$I_{av} = 1.24 \cdot 10^6$	$I_{av} = 1.66 \cdot 10^6$
Maximum protection time:	[s]	105	105
Classification:		T2	T2
Beam diameter d_{86}:	[mm]	50	50

This certificate confirms that the tested guard material has sufficient protection time for its use in laser systems by intermediate observation (classification T2 / inspection interval 100 s) at specified wave lengths and protective exposure limits.

Nuremberg, 11th November 2021

Von der IHK Nürnberg für Lasertechnik / Lasermaterialbearbeitung

Prof. Dr.-Ing. Peter Hoffmann

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IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY

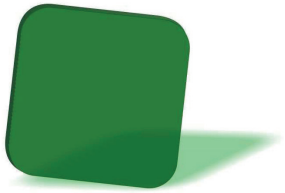
Product Laser safety window

Company

Cepro International BV
Provinciënbaan 16
5121 DL Rijen
The Netherlands

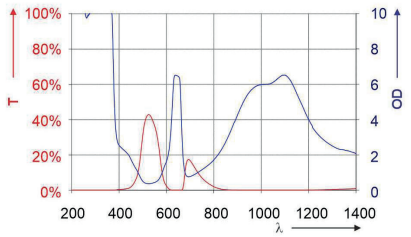
Tel. no. for information / emergency +31 (0)161 22 64 72
Fax no. for information / emergency +31 (0)161 22 49 73

HIGHLIGHTS



The laser safety window 000.P1H09.1006 from laservision is suitable for Nd:YAG or fiber lasers. It is certified according to DIN EN 60825-4 and is CE-marked accordingly. It provides protection (OD6+) in the NIR range from 1064 nm to 1100 nm as well as OD4+ in the red wavelength range from 630 nm to 656 nm. This enables use in machines with seam-tracking sensors or similar measurement systems.
It has a daylight transmission of approx. 18% and provides sufficient visual brightness and color recognition.
The laser safety window 000.P1H09.1006 is available in various standard sizes and in custom dimensions up to a size of 3000 × 2000 mm².

FILTER CURVE



Transmissions- und OD-Kurve //
transmission and OD curve

SPECIFICATIONS

Properties	
Color:	Dark green
Color vision:	Sufficient
Filter thickness:	Approx. 3 mm
Filter material:	Plastic
Filter technology:	Absorption filter
Standards:	EN 60825
Protection range:	Near infrared, visible
VLT (approx.):	18%
Visual brightness:	Sufficient

DIN EN 60825-4

897–960 nm | 124 kW/m² | T2 | t_{max} = 105 s
960–1190 nm | 166 kW/m² | T2 | t_{max} = 105 s

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OD

Wavelength (nm)	OD
180–365	(OD8+)
>365–380	(OD4+)
>380–390	(OD2+)
>390–460	(OD1+)
600–615	(OD1+)
615–<621	(OD2+)
621–<630	(OD3+)
630–656	(OD4+)
>656–664	(OD3+)
>664–667	(OD2+)
>667–674	(OD1+)
750–<830	(OD1+)
830–<865	(OD2+)
865–<897	(OD3+)
897–<940	(OD4+)
940–<1064	(OD5+)
1064–1100	(OD6+)
>1100–1150	(OD5+)
>1150–1190	(OD4+)
>1190–1235	(OD3+)
>1235–1280	(OD2+)
>1280–1440	(OD1+)