

IEC62471A - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ATTACHMENT TO TEST REPORT IEC 62471 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES Photobiological safety of lamps and lamps systems			
Differences according to.....: EN 62471:2008			
Attachment Form No.....: EU_GD_IEC62471A			
Attachment Originator IMQ S.p.A.			
Master Attachment 2009-07			
Copyright © 2009 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			

	CENELEC COMMON MODIFICATIONS (EN)		P
4	EXPOSURE LIMITS		P
	Contents of the whole Clause 4 of IEC 62471:2006 moved into a new informative Annex ZB		—
	Clause 4 replaced by the following:		P
	Limits of the Artificial Optical Radiation Directive (2006/25/EC) have been applied instead of those fixed in IEC 62471:2006	See appended Table 6.1	P
4.1	General		P
	First paragraph deleted		—

EN 62471			
Clause	Requirement + Test	Result – Remark	Verdict

Table 6.1		Emission limits for risk groups of continuous wave lamps (based on EU Directive 2006/25/EC)							P
Risk	Action spectrum	Symbol	Units	Techcomlight SmartLED/TechLED 10000lm-module ($\alpha = 100$ mrad)					
				Exempt		Low risk		Mod risk	
				Limit	Result	Limit	Result	Limit	Result
Actinic UV	$S_{UV}(\lambda)$	E_s	$W \cdot m^{-2}$	0,001	0,000	-	-	-	-
Near UV		E_{UVA}	$W \cdot m^{-2}$	0,33	0,0	-	-	-	-
Blue light	$B(\lambda)$	L_B	$W \cdot m^{-2} \cdot sr^{-1}$	100	2120	10000	2390	4000000	--
Blue light, small source	$B(\lambda)$	E_B	$W \cdot m^{-2}$	0,01*	N/A	1,0	--	400	--
Retinal thermal	$R(\lambda)$	L_R	$W \cdot m^{-2} \cdot sr^{-1}$	$2,80 \cdot 10^5$	$3,08 \cdot 10^4$	$28000/\alpha$	--	$71000/\alpha$	--
Retinal thermal, weak visual stimulus**	$R(\lambda)$	L_{IR}	$W \cdot m^{-2} \cdot sr^{-1}$	545000 $0,0017 \leq \alpha \leq 0,011$	N/A				
				$6000/\alpha$ $0,011 \leq \alpha \leq 0,1$	N/A				
IR radiation, eye		E_{IR}	$W \cdot m^{-2}$	100	4,83	570	--	3200	--

* Small source defined as one with $\alpha < 0,011$ radian. Averaging field of view at 10000 s is 0,1 radian.

** Involves evaluation of non-GLS source

NOTE The action functions: see Table 4.1 and Table 4.2

The applicable aperture diameters: see 4.2.1

The limitations for the angular subtenses: see 4.2.2

The related measurement condition 5.2.3 and the range of acceptance angles: see Table 5.5.