

CERTIFICAAT

EC-CERTIFICATE OF CONFORMITY

0958 – CPD – VL004/1

In compliance with the Directive 89/106/EEC of the Council of European Communities of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to the construction products (Construction Products Directive - CPD), amended by the Directive 93/68/EEC of the Council of European Communities of 22 July 1993, it has been stated that the construction product

SIGNAL HEADS

produced by

Groenpol Verkeerssignalering
part of Ko Hartog Verkeerstechniek BV
Marconistraat 35
1704 RH Heerhugowaard
The Netherlands

is submitted by the manufacturer to a factory production control and to the further testing of samples taken at the factory in accordance with a prescribed test plan and that the approved body INTRON Certificatie B.V. (identification number 0958) has performed the initial type-testing for the relevant characteristics of the product, the initial inspection of the factory and of the factory production control and performs the continuous surveillance, assessment and approval of the factory production control.

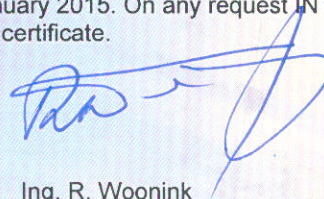
This certificate attests that all provisions concerning the attestation of conformity and the performances described in Annex ZA of the standard

EN 12368:2006

were applied and that the product fulfils all the prescribed requirements (see tables 1, 2, 3 and 4).

This certificate was first issued on 20 January 2010 and remains valid as long as the conditions laid down in the harmonised technical specification in reference or the manufacturing conditions in the factory or the FPC itself are not modified significantly, and latest on 20 January 2015. On any request INTRON Certificatie B.V. will give information about the validity of the certificate.

Culemborg (NL), 20 January 2010



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Table 1: Characteristics Signal Head type:
GROENPOL housing 200 mm with TRAFILED LX modules with coloured lenses

Essential characteristic	EN 12368: 2006 §	Characteristic	Method	Declared value/level/ class		
				Signal Head Groenpol 200 mm with Trafiled LX modules with coloured lenses		
<i>Structural performance (Groenpol 200 mm housing)</i>						
Resistance to horizontal loads	4.4	Loads	EN 12899-1: 2001 table 13: Wind table 14: Point table 15: Snow	WLO (NPD) PLO (NPD) DSL0 (NPD)		
	4.4	Deflections	EN 12899-1: 2001 table 16: Bending table 17: Torsion	TDB0 (NPD) TDT0 (NPD)		
Impact resistance	4.1	Impact resistance	EN 12368: 2006 table 9	IR3		
Random vibration	4.1	Random vibration	EN 12368: 2006 table 10	Pass		
<i>Physical performance (Groenpol 200 mm housing)</i>						
Ingress	4.2	Ingress water Ingress dust	EN 12368: 2006 table 11	IP54		
Temperature	5.1	Temperature	EN 12369: 2006 table 12	Class B		
Electrical safety	5.2	EMC	EN 50293	Declared		
<i>Visibility characteristics (200 mm Trafiled LX modules with coloured lens)</i>						
				R	Y	G
Code LED module (Trafiled LX series)				LX-200-42R	LX-200-42Y	LX-200-42G
Size	6.2	Diameter (mm)	EN 12368: 2006 clause 6.2	200	200	200
Luminous intensity	6.3	Luminous intensity	EN 12368: 2006 table 1	A 3/1	A 3/1	A 3/1
Distribution of luminous intensity	6.4	Distribution of luminous intensity	EN 12368: 2006 table 3	W	W	W
Luminance uniformity	6.5	Luminance uniformity	EN 12368: 2006 clause 6.5	≥ 1:10	≥ 1:10	≥ 1:10
Maximum phantom signal	6.6	Maximum phantom signal	EN 12368: 2006 table 6	Class 2,3,4	Class 2,3	Class 2,3
Colour	6.7	Colour	EN 12368: 2006 table 7	Pass	Pass	Pass
Combined colour	6.7	Combined colour	EN 12368: 2006 table 7	Pass	Pass	Pass
Symbol	6.8	Symbol	EN 12368: 2006 clause 6.8	NPD	NPD	NPD
Background screen	6.9	Background screen	EN 12368: 2006 clause 6.9	NPD	NPD	NPD

**Table 2: Characteristics Signal Head type:
GROENPOL housing 200 mm with Dialight Eclipse 438 modules with clear lenses**

Essential characteristic	EN 12368: 2006 §	Characteristic	Method	Declared value/level/ class		
				Signal Head Groenpol 200 mm with Dialight Eclipse 438 modules with clear lenses		
<i>Structural performance (Groenpol 200 mm housing)</i>						
Resistance to horizontal loads	4.4	Loads	EN 12899-1: 2001 table 13: Wind table 14: Point table 15: Snow	WL0 (NPD) PL0 (NPD) DSL0 (NPD)		
	4.4	Deflections	EN 12899-1: 2001 table 16: Bending table 17: Torsion	TDB0 (NPD) TDT0 (NPD)		
Impact resistance	4.1	Impact resistance	EN 12368: 2006 table 9	IR3		
Random vibration	4.1	Random vibration	EN 12368: 2006 table 10	Pass		
<i>Physical performance (Groenpol 200 mm housing)</i>						
Ingress	4.2	Ingress water Ingress dust	EN 12368: 2006 table 11	IP54		
Temperature	5.1	Temperature	EN 12369: 2006 table 12	Class B		
Electrical safety	5.2	EMC	EN 50293	Declared		
<i>Visibility characteristics (200 mm Eclipse 438 modules with clear lens)</i>						
				R	Y	G
Code LED module (Eclipse 438 series)						
Size	6.2	Diameter (mm)	EN 12368: 2006 clause 6.2	200	200	200
Luminous intensity	6.3	Luminous intensity	EN 12368: 2006 table 1	A 3/1	A 3/1	A 3/1
Distribution of luminous intensity	6.4	Distribution of luminous intensity	EN 12368: 2006 table 3	W	W	W
Luminance uniformity	6.5	Luminance uniformity	EN 12368: 2006 clause 6.5	≥ 1:10	≥ 1:10	≥ 1:10
Maximum phantom signal	6.6	Maximum phantom signal	EN 12368: 2006 table 6	Class 2,3,4	Class 2,3,4	Class 2,3,4
Colour	6.7	Colour	EN 12368: 2006 table 7	Pass	Pass	Pass
Combined colour	6.7	Combined colour	EN 12368: 2006 table 7	Pass	Pass	Pass
Symbol	6.8	Symbol	EN 12368: 2006 clause 6.8	NPD	NPD	NPD
Background screen	6.9	Background screen	EN 12368: 2006 clause 6.9	NPD	NPD	NPD

**Table 3: Characteristics Signal Head type:
GROENPOL housing 300 mm with TRAFILED LX modules with coloured lenses**

Essential characteristic	EN 12368: 2006 §	Characteristic	Method	Declared value/level/ class		
				Signal Head Groenpol 300 mm with Trafiled LX modules with coloured lenses		
<i>Structural performance (Groenpol 300 mm housing)</i>						
Resistance to horizontal loads	4.4	Loads	EN 12899-1: 2001 table 13: Wind table 14: Point table 15: Snow	WL0 (NPD) PL0 (NPD) DSL0 (NPD)		
	4.4	Deflections	EN 12899-1: 2001 table 16: Bending table 17: Torsion	TDB0 (NPD) TDT0 (NPD)		
Impact resistance	4.1	Impact resistance	EN 12368: 2006 table 9	IR3		
Random vibration	4.1	Random vibration	EN 12368: 2006 table 10	Pass		
<i>Physical performance (Groenpol 300 mm housing)</i>						
Ingress	4.2	Ingress water Ingress dust	EN 12368: 2006 table 11	IP54		
Temperature	5.1	Temperature	EN 12369: 2006 table 12	Class B		
Electrical safety	5.2	EMC	EN 50293	Declared		
<i>Visibility characteristics (300 mm Trafiled LX modules with coloured lens)</i>						
				R	Y	G
Code LED module (Trafiled LX series)				LX-300-42R	LX-300-42Y	LX-300-42G
Size	6.2	Diameter (mm)	EN 12368: 2006 clause 6.2	300	300	300
Luminous intensity	6.3	Luminous intensity	EN 12368: 2006 table 1	A 3/1	A 3/1	A 3/1
Distribution of luminous intensity	6.4	Distribution of luminous intensity	EN 12368: 2006 table 3	W	W	W
Luminance uniformity	6.5	Luminance uniformity	EN 12368: 2006 clause 6.5	≥ 1:10	≥ 1:10	≥ 1:10
Maximum phantom signal	6.6	Maximum phantom signal	EN 12368: 2006 table 6	Class 2,3	Class 2,3,4	Class 2,3
Colour	6.7	Colour	EN 12368: 2006 table 7	Pass	Pass	Pass
Combined colour	6.7	Combined colour	EN 12368: 2006 table 7	Pass	Pass	Pass
Symbol	6.8	Symbol	EN 12368: 2006 clause 6.8	NPD	NPD	NPD
Background screen	6.9	Background screen	EN 12368: 2006 clause 6.9	NPD	NPD	NPD