

LIMS



LED LUMINOUS GUIDANCE SIGN SINGLE FACE

COMPLIANCES

ICAO: Annex 14 - Volume I para 5.4
Aerodrome Design Manual – Part 4 and 6 (Frangibility)
EASA: CS-ADR-DSN
AENA: DIN/DSEYN/PPT/022-02/12
NATO: STANAG 3316
ENAC: Rules for the construction and operation of airports
IEC: 61827

APPLICATIONS

LIMS guidance signs, inside lighted, are designed for use on airport taxiways and runways to mark taxi routes and intersections, by day and by night. Colours may be black on yellow, yellow on black, or white on red depending on the application as defined by ICAO. LIMS signs may be used as guidance markers in compliance with STANAG Specs.

BENEFITS

- Variable length from 1m to over 3m depending on inscription
- 1 to 4 LED sticks of variable length positioned in the top of the sign to facilitate maintenance operations
- Power supply from series circuits through isolating transformers. See TABLE B for isolating transformer choice (**)
- Fully compatible with existing AFL infrastructure
- Operating with any topology of CCRs designed in compliance with IEC or FAA requirements
- Constant average luminance widely exceeding ICAO
- One or two levels of luminance as a function of the supply current
- Monitoring LED's status, as an option

FEATURES AND PERFORMANCES

- Designed in compliance with FAA AC 150/5345-44
- Structural integrity assured by extruded aluminium profiles
- Matt white external finishing
- Metric stainless steel hardware
- Long life, UV and abrasion resistant sign faces
- External switch to switch off the sign and short circuit the secondary of the isolating transformer
- Wind speed: 322 km/h (mode 2 - FAA AC 150/5345-44)
- On request, it is available a reinforced version to withstand 483 km/h (mode 3 - FAA AC 150 / 5345-44)
- Temperature range: -40°C to +55°C
- On request, status monitoring of LEDs, with fail-open, in accordance with the FAA-EB #67
- Up to two levels of luminance, adjustable on the basis of the supply current

INSTALLATION

- On concrete platform by means of floor flanges

LIMS01- 3 - 20 - 1 - 01**Basic P/N:** _____**Message Size:** _____

3 = 300 mm Legend Height

4 = 400 mm Legend Height

Type (visible length mm) (*): _____

10 = 990

20 = 1950

30 = 2890

13 = 1250

22 = 2190

15 = 1470

24 = 2430

Luminance Level: _____

1 = Constant Luminance

2 = Two luminance levels (**)

Options: _____

D2 = Parallel circuit 230 V AC (***)

01 = Tether (Mandatory with option 48)

02 = Yellow frame (special version)

03 = Black frame (special version)

04 = Circuit Stabilizer

10 = Monitoring

48 = Reinforced version FAA-mode 3 (483 km/h)

69 = Orange rear side for single face signs

70 = Bird Spikes

S004 = Frame H600 with Legend H400

- Tables with retro-reflective panels (opt. 23) are available as a special version. Contact OCEM for further details.

(*) Other lengths are available as special version. Contact OCEM for further details.

(**) Not available with D2 option

(***) No need for transformer.

NOTES

- If the message cannot be included in a sign only, two signs may be collocated
- To determine the exact length of the sign to fit your message and the transformer size, contact OCEM
- The colours of the sign face and the legends must be specified for each sign
- Multiple messages and colours may appear on a sign face

Typical Photometric performance

	High Intensity (Constant Lum.)		Low Intensity (Two Lum. Levels)	
	ICAO Reqs	Typ. Values	ICAO Reqs	Typ. Values
Average luminance yellow	>150 cd/m ²	180 cd	>50 cd/m ²	110 cd
Average luminance red	>30 cd/m ²	40 cd	>10 cd/m ²	16 cd
Average luminance white	>300 cd/m ²	350 cd	>100 cd/m ²	135 cd
Maximum ratio between two adjacent points	<1.5	1.30	<1.5	1.30
Maximum ratio across sign	<5.0	1.80	<5.0	1.80

NOTE: cd/m^2 – candela per square meter

TABLE A – Power Consumption with maximum Luminance

Type (visible length)	Power Consumption		Type (visible length)	Power Consumption	
	Series circuit (6.6 A)	Parallel circuit (230 V)		Series circuit (6.6 A)	Parallel circuit (230 V)
10	32 W	15 W	22	53 W	33 W
13	36 W	17 W	24	61 W	34 W
15	40 W	21 W	30	70 W	43 W
20	51 W	30 W			

Note: In typical operating conditions, the power factor is greater than 0.7

TABLE B – Isolating Transformer Size ()**

	CCR 5 STEP	CCR 3 STEP	CCR 1 STEP
TYPE (visible length)	2.8 ÷ 6.6 A	4.8 ÷ 6.6 A	6.6 A
10	150 W	65 W	65 W
13	150 W	100 W	65 W
15	150 W	100 W	65 W
20	200 W	100 W	100 W
22	200 W	150 W	100 W
24	200 W	150 W	100 W
30	300 W	150 W	150 W

(**) Table B reports some example values, referring to a constant luminance sign, without option 04 and with sinusoidal power supply. We recommend to refer to OCEM to determine the correct transformer size for different combinations.