



# **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 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**

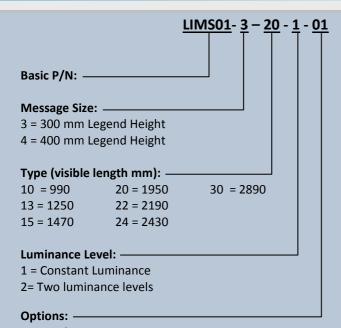
- Variable length from 1m to over 3m depending on inscription
- 1 to 4 LED sticks of variable length positioned in the top of the sign to facilitate maintenance operations
- Power supply from series circuits through isolating transformers. See TABLE B for isolating transformer choice
- Fully compatible 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)
- Minimum protection degree: IP65
- 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



# **NOTES**

- Maximum sign length of 4m. Note that length exceeding 3m are not conforming to the recommendations of ICAO Aerodrome Design Manual - Part 4. 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	Тур.	ICAO	Тур.
	Reqs	Values	Reqs	Values
Average	>150	180 cd	>50	110 cd
luminance yellow	cd/m²	160 Cu	cd/m <sup>2</sup>	
Average	>30	40 cd	>10	16 cd
luminance red	cd/m²		cd/m²	
Average	>300	350 cd	>100	135 cd
luminance white	cd/m²	350 Cu	cd/m <sup>2</sup>	
Maximum ratio				
between two	<1.5	1.30	<1.5	1.30
adjacent points				
Maximum ratio	<5.0	1.80	<5.0	1.80
across sign	<b>\</b> 5.0	1.60	<b>\</b> 3.0	1.60

- 01 = Tether
- 02 = Yellow frame
- 03 = Black frame
- 04 = Circuit Stabilizer
- 10 = Monitoring
- 48 = Reinforced version FAA-mode 3 (483 km/h)
- 69 = Orange rear side for single face signs (Italy)
- 70 = Bird Spikes

TABLE A - Power Consumption with maximum Luminance

Type (visible length)	Power Consumption	TYPE (visible length)	Power Consumption
10	32 W	22	53 W
13	36 W	24	61 W
15	40 W	30	70 W
20	51 W		

Note: In typical operating conditions, the power factor is greater than 0.9

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.

We reserve the right to change the design or specification data without notice

UC-PU-0330\_EN-Rev.B

#### Multi Electric Mfg., Inc.