



# Datasheet

## LED Retrofit Kit for Guidance Signs

## General

Taxiway Guidance Signs (TGS) equipped with halogen lamps or fluorescent tubes are inefficient and consume a lot of power. With the LED Retrofit Kit, your existing TGS can be upgraded to LED technology, reducing power consumption by up to 70% while creating a uniform light distribution. The signs could be upgraded to meet ICAO light distribution requirements. The retrofitted signs will have low power consumption with more than 50,000 hours lifetime of the LED modules when in full operation.

## Key features

- Simple retrofit method requiring no more than 1 hour for each sign
- Each LED module array fitted with 5 high-performance LEDs with an expected lifetime of 50,000 hours
- All components resistant to corrosion
- Optional fail-open functionality

## Description

The LED Retrofit Kit includes:

- A number of LED sign modules (IP68), each for 24 VDC – 400 mA
- The same number of aluminum plates with socket for the LED module (article number 40-6352)
- Internal and external connection cables
- An electronic driver with 6.6 A or 230 V supply

## Configuration table

One LED module array will illuminate a sign surface area of 400 mm wide and 600 mm high. The number of LED modules required per sign will depend upon its size (length, height and depth). Please refer to the configuration tables below to calculate the requirements for each sign size.

### Configuration table

	Illumination width (per module)	Illumination height (per module)	Relative illuminaton intensity	Number of modules
Distance to the front plate	Optimum distance between the modules	Optimum distance between the modules		See configuration table:
100	300	500	196 %	1
120	350	550	136 %	2
140	400	600	100 %	3
160	450	650	77 %	4
180	500	700	60 %	5

Table 1

Illuminated width x100		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
Height of sign surface	Number of module rows	Number of modules per sign																											
400 – 500	single row vertical	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	10	10	10			
>500 – 600	two rows horizontal	4	4	4	4	4	6	6	6	6	6	8	8	8	8	8	10	10	10	10	10	12	12	12	12	12			
>600 – 1000	two rows vertical	4	6	6	6	8	8	8	10	10	10	12	12	12	14	14	14	16	16	16	18	18	18	20	20	20			
>1000 – 1200	four rows horizontal	-	8	8	8	8	12	12	12	12	12	16	16	16	16	16	20	20	20	20	20	24	24	24	24	24			
>1000 – 1500	three rows vertical	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

**Table 2**

Illuminated width x100		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Height of sign surface	Number of module rows	Number of modules per sign																								
400 – 550	single row vertical	2	2	3	3	3	4	4	4	4	5	5	5	6	6	6	6	7	7	7	8	8	8	8	9	9
>550 – 700	two rows horizontal	4	4	4	4	4	4	6	6	6	6	6	8	8	8	8	8	8	10	10	10	10	10	12	12	12
>700 – 1100	two rows vertical	4	4	6	6	6	8	8	8	8	10	10	10	12	12	12	12	14	14	14	16	16	16	16	18	18
>1100 - 1400	four rows horizontal	-	-	8	8	8	8	12	12	12	12	12	16	16	16	16	16	16	20	20	20	20	20	24	24	24
>1100 - 1650	three rows vertical	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Table 3**

Illuminated width x100		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Height of sign surface	Number of module rows	Number of modules per sign																								
400	single row horizontal	1	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	5	5	5	5	5	5
>400 – 600	single row vertical	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
>600 – 800	two rows horizontal	2	4	4	4	4	4	4	6	6	6	6	6	6	8	8	8	8	8	8	10	10	10	10	10	10
>800 – 1200	two rows vertical	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16

**Table 4**

Illuminated width x100		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Height of sign surface	Number of module rows	Number of modules per sign																								
400 – 450	single row horizontal	1	2	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4	4	4	4	5	5	5	5
>450 – 650	single row vertical	2	2	2	2	3	3	3	3	4	4	4	4	4	5	5	5	5	6	6	6	6	6	7	7	7
>650 – 900	two rows horizontal	2	4	4	4	4	4	4	4	6	6	6	6	6	6	8	8	8	8	8	8	8	10	10	10	10
>900 – 1300	two rows vertical	4	4	4	4	6	6	6	6	8	8	8	8	8	10	10	10	10	12	12	12	12	12	14	14	14

**Table 5**

Illuminated width x100		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Height of sign surface	Number of module rows	Number of modules per sign																								
400 – 500	single row horizontal	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	5	5
>500 – 700	single row vertical	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	5	5	5	5	5	6	6	6	6	6
>400 – 1000	two rows horizontal	2	2	4	4	4	4	4	4	4	6	6	6	6	6	6	6	8	8	8	8	8	8	8	10	10
>1000 – 1400	two rows vertical	4	4	4	4	4	6	6	6	6	6	8	8	8	8	8	10	10	10	10	10	10	12	12	12	12

## Installation

The LED Retrofit Kit provides various mounting possibilities:

- Clip connection with 4 clips
- Screw connection with 4 bolts (default parts, not included in the delivery)

Several LED Retrofit Kits are connected with each other per plug connection in a parallel circuit.

- Maximum 6 LED modules can be connected on one 6.6 A electronic driver FAA style 2
- Maximum 5 LED modules can be connected on one 6.6 A electronic driver FAA style 3
- Maximum 10 LED modules can be connected on one 230 V electronic driver

## Document Information

Name : 04\_LED\_Retrofit\_Kit\_For\_Guidance\_Signs\_03-71054  
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 Language : English (Original manual)

For the latest version of this document see <https://www.tkh-airportsolutions.com/airfield-products/> or scan:



## Ordering code

### Ordering code

Item	Article number	Minimum packaging size
LED-module	203.361-008	1 piece / box
Internal cable group	203.362-008	1 piece / box
External cable group	203.363-008	1 piece / box
Electronic driver style 2	203.364-007	1 piece / box
Electronic driver style 2 with fail open	203.365-007	1 piece / box
Electronic driver style 3	203.364-017	1 piece / box
Electronic driver style 3 with fail open	203.365-017	1 piece / box
Electronic driver 230 V	845250	1 piece / box
Aluminum plate with socket for LED module	40-6352	1 piece / box

These articles can be ordered separately.

Please contact our Sales department for further information.



### Company profile:

TKH Airport Solutions is an innovator in airfield ground lighting, offering a complete range of LED AGL products. We build upon the know-how from a long and successful tradition of pioneering developments in the AGL and connectivity industry. Being part of the TKH Group, our company can build on a history of more than 90 years in smart connectivity, energy distribution and AGL.

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