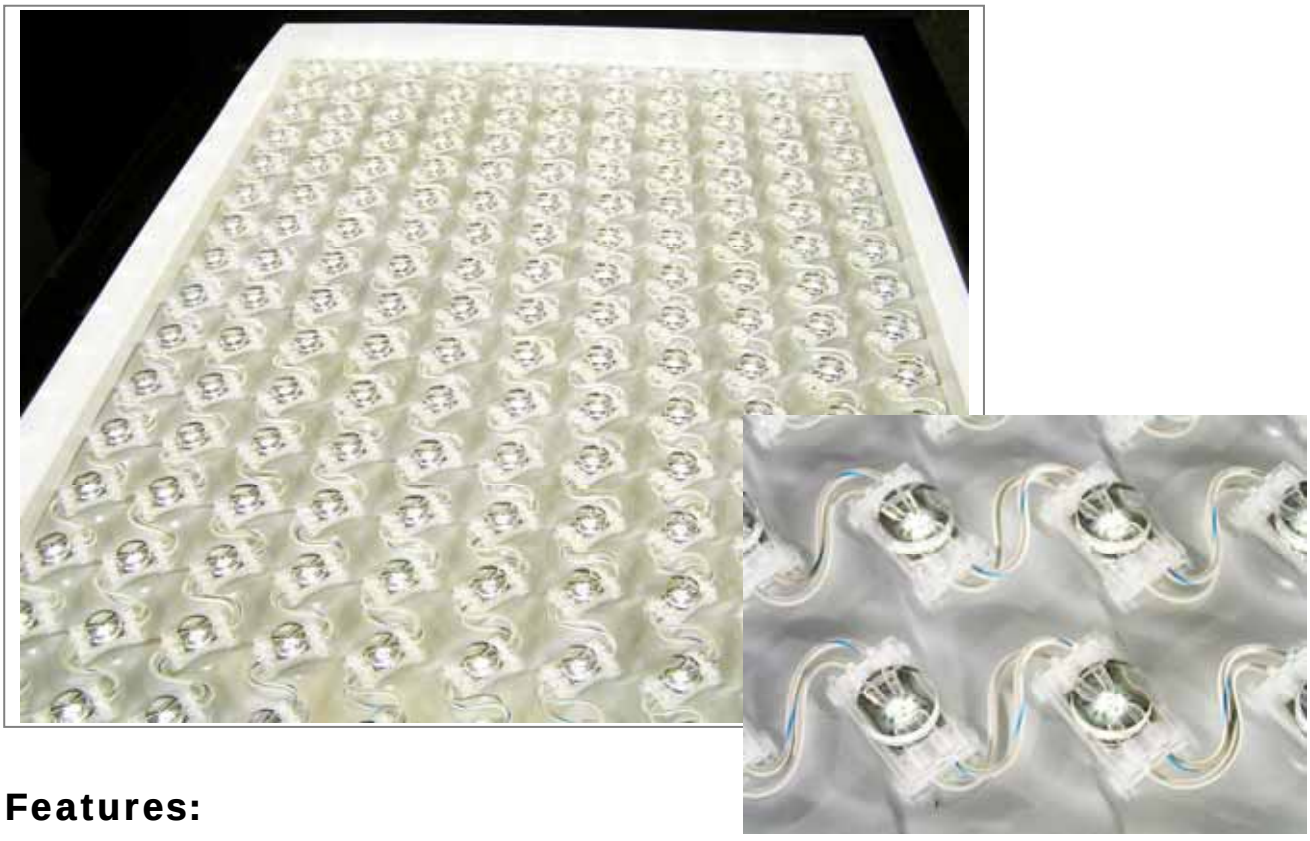
Alpha-One Electronics Ltd.
Yokohama, Japan

White LED Module **AFA002F**

**AFA002F is White color LED backlight module,
developed particularly for signboard and indirect illumination.
Since high bright middle power LEDs are installed,
excellent illumination, low power consumption,
and long lifetime (60000hrs) are realized.
Due to the original optical design,
Quite thin and compact signboard can be designed.**



Features:

- **Long life-time: more than 60,000 hrs.***
- **Compact and Thin signboard can be designed.**
  - **Ideal internal thickness of signboard: 50~60mm**
- **Low power dissipation (DC 5V, 0.5W/pc)**
- **Perfect emission without uneven light**
- **Rain-proof treatment (IPX3)**
- **RoHS compliant (Mercury free)**

** inspected and proved according to our standard measuring conditions.*

Applications:

- **Backlight of signboard**
- **Channel character sign**
- **Hazard signboard**
- **Indirect illumination**

Outline:

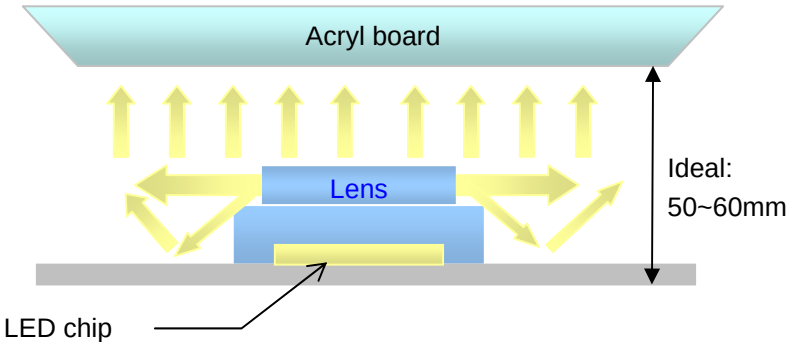
Circuit	In parallel
Quantity of LED per one string	50pcs
LED color rank [CIE]	2 ranks available *
Forward current per one LED	100mA
Maximum pitch between LEDs	143mm
Input power	DC 5V, 0.5W / pc
Water-proof standard	IPX3
Operating Temperature	-20℃ ~ +60℃

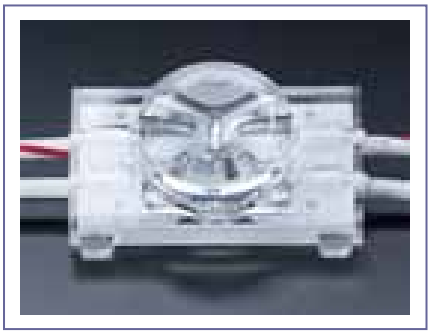
***White Color LED Chromaticity ranks:**

Rank-B (-001)	X	0.296	0.287	0.330	0.330
	Y	0.276	0.295	0.339	0.318
Rank-C (-002)	X	0.330	0.361	0.330	0.356
	Y	0.360	0.385	0.318	0.351

Structure

Due to the special optical lens, the light emits all sides from LED and this makes the perfect emission from the signboard can be obtained.





Luminosity Examples:

Since each LED module is connected with flexible cable, the various luminosities would be obtained by changing the pitch between LEDs.

Internal depth of signboard*	50mm	60mm	70mm	80mm	90mm	100mm	120mm
Pitch between LEDs	Luminosity (lx)						
50 x 50 mm	3350	3250	3100	3000	2900	2750	2550
60 x 60 mm	2500	2420	2350	2320	2220	2100	1950
70 x 70 mm	1900	1750	1700	1650	1600	1500	1450
80 x 80 mm	1450	1400	1350	1300	1250	1150	1100
90 x 90 mm	1200	1180	1150	1120	1100	1050	980
100 x 100 mm	950	900	850	800	770	750	700
120 x 120 mm	680	650	640	630	600	580	550

* Internal depth:
Distance between the shinning surface of LED and the external surface of board.

Note: The above data was measured according to our standard and should be for the reference only.