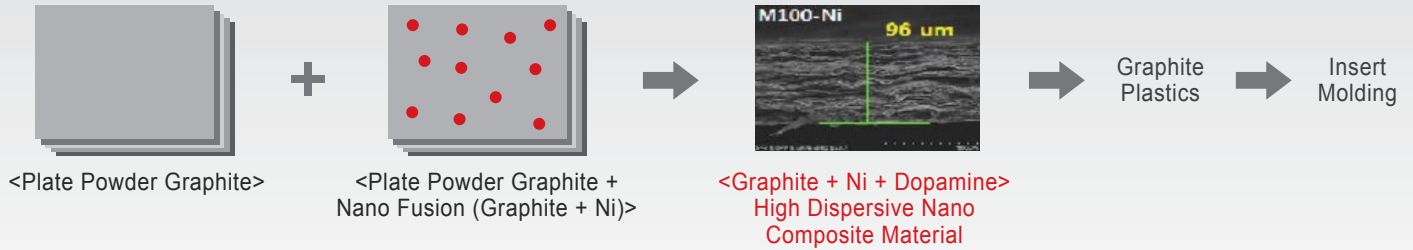


▪ HGM Graphite Plastic Core Competence

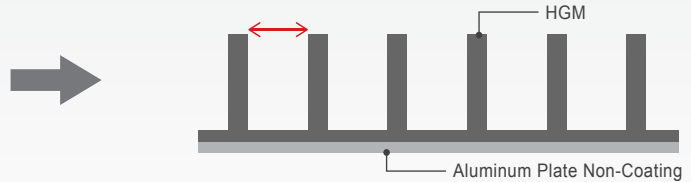


▪ Heat Sink Mechanism Improvement



<Conventional Heat Sink>

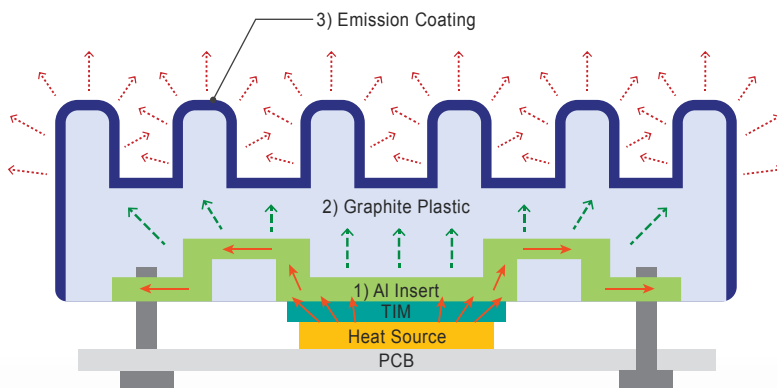
Low Emissivity $\epsilon=0.06$, $k=200\text{W/mK}$
High Weight 200g



<HGM Heat Sink>

Graphite Plastic Emissivity $\epsilon=0.9$ (+15%), $k=5\sim30\text{W/mK}$ (-85%)
Low Weight 80g (-60%)

▪ Merging of Advantages & Performance



3) Functional Coating

- Emissivity 0.95
- Color
- Protect

2) Graphite Plastic

- 10~30 W/mK
- Emissivity 0.9
- Light Weight

1) Aluminum Insert

- 200 W/mK
- Reinforce
- Bolt Assembly

Heat Source

Thermal
&
Efficiency

Weight

▪ Application (LED Lamp, Heat Sink, Automotive Headlight, Signal, Vehicle)

A. LED Module (Heat Sink)



Features

LED with high efficiency & excellent thermal property
Weight 150g
IP 66

Ordering Information

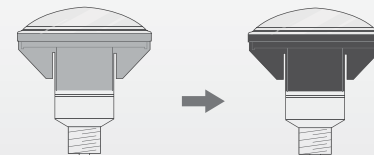
	Consumed Wattage	Number of LEDs	Drive Current	Luminous Flux	CCT*
Amohg-20-egd	21W	10	700mA	2310 lm	4500~5700K

Comparison to Weight by Material

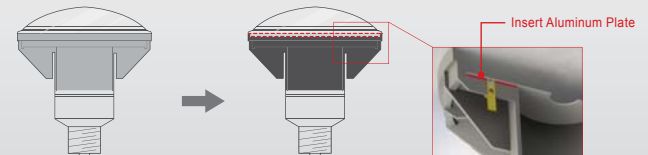
	Heat Sink Image	Thermal Conductivity (W/mK)		Test Result
		LED	ΔT	
Default (Al Die Casting)		80.2	-	197g
HTP (Al Die Casting + Emissive Coating)		70.5	-9.7	197g Thermal Efficiency
HGM (Thermal Plastic + Al Insert)		77.7	-2.5	150g -24% Light Weight Case

B. LED Retrofit Lamp with Heat Sink Design

Option 1. Thermal Plastic Coating



Option 2. HGM Application + Insert Aluminum Plate



Option 3. Brazing with HTP Coating

