



eco



quality



safety

JAPANESE QUALITY

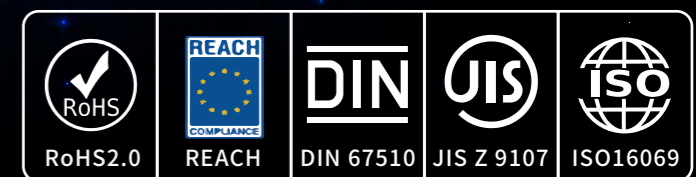
アルファベガ
 α -Vega[®]

PATENTED PIGMENT

Manufacturer

 LTI Corporation
www.ltic.co.jp

Contact us:



LTI is a leading company in the Japanese PLC industry

PLC: PhotoLuminesCence

LTI has been developing and producing high quality PLC products for safety purposes since 2001. Since 2013 LTI has held over 90% of the market share of PLC production in Japan. The company continues to develop related technologies and is currently focused on the improvement of PLC pigments. Pigments such as the alpha-Vega Series (patent No. 5967787) which is a superior water resistant pigment.



Patented (No.5967787)

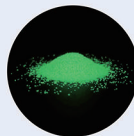


RoHS2.0



REACH(第15次SVHC)

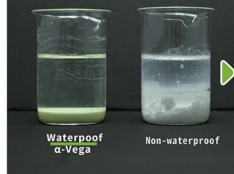
Ultra High Performance PLC(Photoluminescent)Pigment “*α-Vega* Series”



The *α-Vega* Series is a group of strontium aluminate based powder pigments that were developed and patented by LTI. Unlike conventional pigments, *α-Vega* will continue to glow even when completely submerged in water. In addition to being completely waterproof, *α-Vega* has also increased the light emitting ability relative to previous pigments.

Waterproof Pigment “*α-Vega*”

Waterproof test
after 1 year



- Excellent Water Resistant
- The pH level of the Water Proof Pigments in water after 3 month remains “7.0” stable
- Non-toxic, Non-radioactive,harmless

Elapsed time	GDK11025WP (waterproof)		GDK11025 (Non-waterproof)	
	Relative Luminosity(%)	pH	Relative Luminosity(%)	pH
0	100	7	100	11
0.5	100	7	47	11
1	100	7	14	11
10	100	7	3	11
30	100	7	1	11

Testing Condition in water resistant: 30g of powder Pigment soak in 100ml of pure water (23°C ± 2 °C)

Test method : Excitation with fluorescent lamp(D65) of 200 lux for 20 minutes

Ultra High Performance P L C (Photoluminescent) Pigment



Patented Waterproof Pigment

No chemical reaction !
α-Vega continue to glow
even when completely submerged
in water !



PATENT No.5967787

The Highest Luminosity in the industry

α-Vega meets JIS Z 9107 JD
DIN 67510 Class E !



Long afterglow

Glow 10 times higher than
any other powder pigment.
Glow for more than 12 hours.



Outdoor use

α-Vega is weather and
water resistance.Can be
used for outdoor applications.



Excitation Wavelength

Excitation wavelength in
wide range between
200~480nm.



Absorb LED light energy

Testing data is available.



Applications



α-Vegas available in a range of plastic types such as PP, PE(HDPE/LDPE), PVC, EVA, PS, PC, ABS. It is widely used in various fields of fire emergency system, transportations, novelty goods, and coating and printing, etc.

α-Vega complies with EU regulations:



RoHS

The RoHS directive aims to restrict certain dangerous substances commonly used in electronic and electronic equipment. Any RoHS compliant component is tested for the presence of Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent chromium (Hex-Cr), Polybrominated biphenyls (PBB), and Polybrominated diphenyl ethers (PBDE).

※ European Chemicals Agency



REACH

REACH is a regulation of the European Union, adopted to improve the protection of human health and the environment from the risks that can be posed by chemicals, while enhancing the competitiveness of the EU chemicals industry. It also promotes alternative methods for the hazard assessment of substances in order to reduce the number of tests on animals.

※ European Chemicals Agency



Ultra High Performance Photoluminescent(PLC)Pigment α -Vega^{TM/PLC}

Grades and Characteristics

Test method: Excitation with fluorescent lamp(D65) of 200 lux for 20 minutes

KYOTO-04 Series

Cost Efficiency : ★★★★★
Performance : ★★★★★

Glow Color	Pigment Color	Grade	Particle Size(D50)	Formula	Code	Afterglow (mcd/m ²)		W.P.
						20 min	60 min	
Green	Light yellow	★	10 μ	SrAl ₂ O ₄ :Eu,Dy	KYOTO-04010G	31	9	×
		★★	45 μ	SrAl ₂ O ₄ :Eu,Dy	KYOTO-04045G	55	16	×

W.P. = Waterproof

11 Series

Cost Efficiency : ★★★★★
Performance : ★★★★★

Glow Color	Pigment Color	Grade	Particle Size(D50)	Formula	Code	Afterglow (mcd/m ²)		W.P.
						20 min	60 min	
Green	Light yellow	★★	10 μ	SrAl ₂ O ₄ :Eu,Dy	GDK11010	63	17	×
		★★★	10 μ	SrAl ₂ O ₄ :Eu,Dy	GDK11010WP	78	21	○
		★★★★	25 μ	SrAl ₂ O ₄ :Eu,Dy	GDK11025	102	33	×
		★★★★	25 μ	SrAl ₂ O ₄ :Eu,Dy	GDK11025WP	123	40	○
		★★★★	60 μ	SrAl ₂ O ₄ :Eu,Dy	GDK11060	176	55	×
		★★★★	60 μ	SrAl ₂ O ₄ :Eu,Dy	GDK11060WP	209	63	○
		★★★★	60 μ	SrAl ₂ O ₄ :Eu,Dy	GDK11060WP	209	63	○
Orange	Pink	★	25 μ	SrAl ₂ O ₄ :Eu,Dy	PDK11025	45	13	×
Yellow	Orange	★	25 μ	SrAl ₂ O ₄ :Eu,Dy	ODK11025	41	11	×
Blue	Light yellow	★★	25 μ	SrAl ₂ O ₄ :Eu,Dy	BDK11025	90	24	×
		★★★	25 μ	SrAl ₂ O ₄ :Eu,Dy	BDK11025WP	103	27	○
		★★★★	60 μ	SrAl ₂ O ₄ :Eu,Dy	BDK11060	149	41	×



Grades and Characteristics

Test method: Excitation with fluorescent lamp(D65) of 200 lux for 20 minutes

13 Series

Cost Efficiency : ★★★★★
Performance : ★★★★★

Glow Color	Pigment Color	Grade	Particle Size(D50)	Formula	Code	Afterglow (mcd/m ²)		W.P.
						20 min	60 min	
Green	Light yellow	★★	10 μ	SrAl ₂ O ₄ :Eu,Dy	GDK13010	80	25	×
		★★★	10 μ	SrAl ₂ O ₄ :Eu,Dy	GDK13010WP	100	30	○
		★★★★	25 μ	SrAl ₂ O ₄ :Eu,Dy	GDK13025	155	48	×
		★★★★	25 μ	SrAl ₂ O ₄ :Eu,Dy	GDK13025WP	187	57	○
		★★★★	60 μ	SrAl ₂ O ₄ :Eu,Dy	GDK13060	219	61	×
		★★★★	60 μ	SrAl ₂ O ₄ :Eu,Dy	GDK13060WP	262	73	○
		★★★★	100 μ	SrAl ₂ O ₄ :Eu,Dy	GDK13100	297	101	×
Blue	Light yellow	★★★★	100 μ	SrAl ₂ O ₄ :Eu,Dy	GDK13100WP	356	120	○
		★★★★	500 μ	SrAl ₂ O ₄ :Eu,Dy	GDK13500WP	398	131	○
		★★★	15 μ	SrAl ₂ O ₄ :Eu,Dy	BDK13015	119	35	×
		★★★★	15 μ	SrAl ₂ O ₄ :Eu,Dy	BDK13015WP	130	38	○
		★★★	30 μ	SrAl ₂ O ₄ :Eu,Dy	BDK13030	141	40	×
		★★★★	30 μ	SrAl ₂ O ₄ :Eu,Dy	BDK13030WP	157	44	○
		★★★★	30 μ	SrAl ₂ O ₄ :Eu,Dy	BDK13030WP	157	44	○

JIS Z 9107 <Japanese Industrial Standard>

Excitation with fluorescent lamp(D65) of 200 lux for 20 min

Sub-Classifications	Luminescence after 20min		Product Codes
	(mcd/m ²)	(mcd/m ²)	
Class JD	200	60	GDK11060WP / GDK13060 / GDK13060WP GDK13100 / GDK13100WP / GDK13500WP
Class JC	100	30	GDK11025 / GDK11025WP / GDK11060 / BDK11025WP / BDK11060 / GDK13010WP GDK13025 / GDK13025WP / BDK13015 / BDK13015WP / BDK13030 / BDK13030WP
Class JB	50	15	KYOTO-04045G / GDK11010 / GDK11010WP / BDK11025 / GDK13010
Class JA	24	7	KYOTO-04010G / PDK11025 / ODK11025

- Waterproof versions of all alpha-Vega pigments are available.
- We can recommend the most suitable pigments and particle sizes for your applications.
- Luminescence requirements are met by choosing the appropriate pigments and particle sizes.
- We customize the pigments according to the required luminosity and the particle size (MOQ:25kg).