Application Guide: LaserMark-G

Colored Laser Marking for Light-Colored Plastics

1. Positioning Statement

LaserMark-G is a laser-responsive additive designed for colored (including green) laser marking on light-colored polymers.
It enables stable chromatic laser marks where conventional laser additives only produce black or gray results.

2. What LaserMark-G Is — and Is Not

LaserMark-G IS:

- A solution for colored / green laser marking
- Suitable for applications requiring visual differentiation or color coding

LaserMark-G IS NOT:

- A general black laser marking additive
- A decorative pigment for bulk coloration
- A replacement for carbon black in standard contrast marking

3. Typical Problems It Solves

LaserMark-G is selected when customers encounter:

- Laser marking systems that produce only black or gray marks
- Organic pigments that:
- burn under laser exposure
- fade after aging
- Requirements for:
- color-coded identification
- visual differentiation
- brand or functional marking beyond black contrast

4. How It Works (Mechanism Level Only)

LaserMark-G responds to laser irradiation through color-selective laser interaction, producing localized surface modification with chromatic response rather than simple carbonization.

This mechanism allows colored or green laser marks to form on light polymer substrates without relying on organic colorants.

(Mechanism description intentionally kept non-formulative.)

www.greatkela.com
kela_overseas@greatkela.com
TEL:86 731-8224 6688
FAX:86 731-8521 5868
Adddress: Room531,Tower C,
Hong Jing Ming Plaza, ShaoShan
N Road 243, ChangSha City, China.

5. Suitable Application Window

Polymers
- PP
- ABS
- PC
- PET
- PA

Base Color
- White
- Light or neutral colors

Laser Types
- Fiber laser
- Nd:YAG laser

Processing
- Standard compounding
- Masterbatch incorporation

6. Typical Use Level
- Below 1 wt% in most systems
- Exact level depends on:
- polymer matrix
- part geometry
- laser parameters
- desired color intensity

Final optimization should be conducted by the user.

7. Performance Benefits
- Enables colored / green laser marks on light plastics
- Inorganic system with better thermal stability than organic pigments
- Permanent, non-migrating laser marks
- Expands design and identification possibilities beyond black marking

8. When NOT to Use LaserMark-G

LaserMark-G is not recommended when:
- Only black or maximum contrast marking is required
- Carbon black or ATO solutions already meet performance needs
- Cost minimization is the sole priority
- Marking must remain color-neutral

www.greatkela.com
kela_overseas@greatkela.com
TEL:86 731-8224 6688
FAX:86 731-8521 5868
Adddress: Room531,Tower C,
Hong Jing Ming Plaza, ShaoShan
N Road 243, ChangSha City, China.

9. Comparison with Common Alternatives

Solution	Limitation
Carbon black	Only black marks, conductivity
ATO-based systems	Black/gray marks only
Organic pigments	Burning, fading under laser

LaserMark-G addresses these limitations within its defined colored-marking window.

10. Technical Support

LaserMark-G is supplied with application guidance.
Formulation-specific support can be provided under NDA when required.

11. Summary

LaserMark-G enables colored and green laser marking on light-colored polymers using an inorganic, laser-responsive system.
It is selected when visual differentiation beyond black marking is required and organic pigments are unsuitable.

www.greatkela.com
kela_overseas@greatkela.com
TEL:86 731-8224 6688
FAX:86 731-8521 5868
Adddress: Room531,Tower C,
Hong Jing Ming Plaza, ShaoShan
N Road 243, ChangSha City, China.