



# TEST REPORT

APPLICANT : MIRACLE IND. CO., LTD.

REPORT NO. : 41-48-03-33991  
SAMPLE RECEIVED DATE : 2003-12-02  
TEST STARTED DATE : 2003-12-02  
REPORT ISSUED DATE : 2003-12-17  
PAGE : 1 OF 3

SAMPLE DESCRIPTION : TWO(2) PIECES OF SUBMITTED SAMPLE SAID TO BE ROAD PAVEMENT MARKER.

COLOR NAME : #1 WHITE, #2 YELLOW

TEST CONDUCTED : AS REQUESTED BY THE APPLICANT, FOR DETAILS PLEASE SEE ATTACHED PAGES.

PREPARED AND CHECKED BY  
FOR FITI

Eun Park

EUN, PARK  
QUALITY MANAGER

AUTHORIZED BY  
FOR FITI

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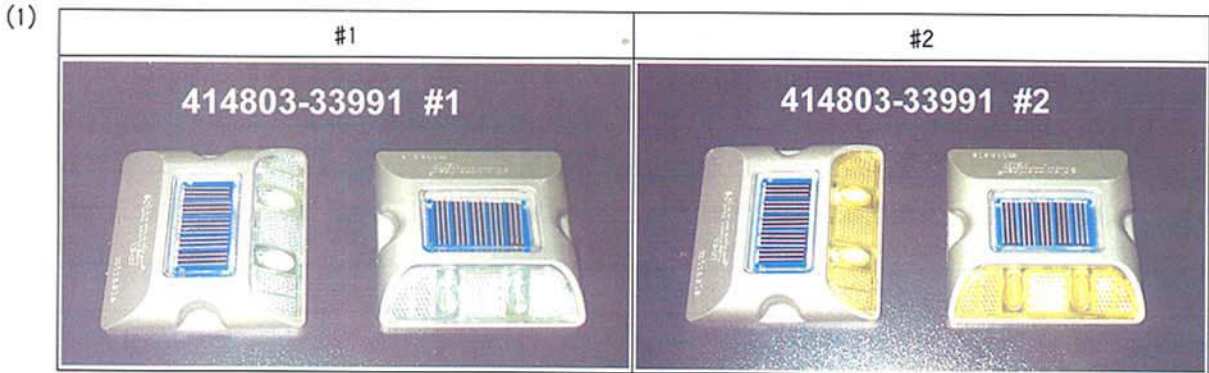
HO CHUL, KIM  
EXECUTIVE DIRECTOR



TEST CONDUCTED

TEST RESULTS

- SAMPLE PHOTO -



(2) LENS IMPACT STRENGTH (ASTM D 4280) : APPEARANCE

#1	NO RADIAL CRACKS OF DELAMINATION
#2	NO RADIAL CRACKS OF DELAMINATION

NOTE) OBSERVED THE APPEARANCE CHANGE AFTER DROP TEST HALF-SPHERE OF RADIUS 6.4mm, WEIGHT 190g WAS DROP FROM REFLECTOR ABOVE 457mm, CONDITION FOR 55°C 1h.

(3) COMPRESSIVE STRENGTH (ASTM D 4280) : APPEARANCE

# 1	WITHOUT BRAKAGE OR SIGNIFICANT DEFORMATION
# 2	WITHOUT BRAKAGE OR SIGNIFICANT DEFORMATION

NOTE) OBSERVED THE APPEARANCE CHANGE AFTER 2727kgf COMPRESSION LOAD TEST WITH THE CENTER OF CYLINDER ROD.

(4) TEMPERATURE CYCLING (ASTM D 4280) : APPEARANCE

#1	NO CRACKING OR DELAMINATION
#2	NO CRACKING OR DELAMINATION

NOTE) OBSERVED THE APPEARANCE CHANGE AFTER 3CYCLES OF 60°C FOR 4h. FOLLOWED BY -7°C FOR 4h.



TEST CONDUCTED

TEST RESULTS

(5) COEFFICIENT OF RETROREFLECTION (ASTM D 4280) : mcd/lux

OBSERVATION ANGLE(°)	ENTRANCE ANGLE(°)	#1	#2
0.2	$\beta_1 = 0$	453.5	252.8
	$\beta_2 = 0$		
	$\beta_1 = 0$	238.9	131.4
	$\beta_2 = +20$		
	$\beta_1 = 0$	249.3	135.5
	$\beta_2 = -20$		

(6) COLOR (ASTM D 4280)

	#1	#2
x	0.453	0.559
y	0.440	0.439