

SOLBLACK

Low Reflection & High Optical Absorption

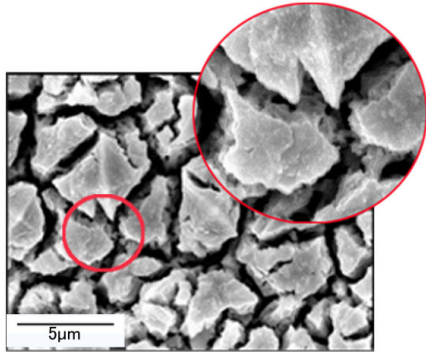
Blackening electroless plating

➤ Characteristics

- Optical absorption : 98% (at visible area)
- Corrosion resistance :
Over electroless Ni-P film (v.s. acid rain)
- Low reflection : *- black -*
0.2% by incidence angle 12° (at visible area)
- Heat resistance :
No effect (by 473K at 2 hours)
- Accuracy :
Possible to uniformly treat at various shapes
(specify film thickness $\pm 10\%$)
- Affinity for materials :
Iron, aluminum, copper, stainless and more
Please contact for more information

Surface observation

SEM image of 'SOLBLACK'



High optical confinement effect was induced to creekside nanostructures.

Color component

Color component was measured by spectrophotometer. (SE2000)

	L*	a*	b*
PHOSBLACKIII	89.9	-5.4	31.3
SOLBLACK	62.2	-4.8	22.8

Blackness : SOLBLACK > PHOSBLACKIII

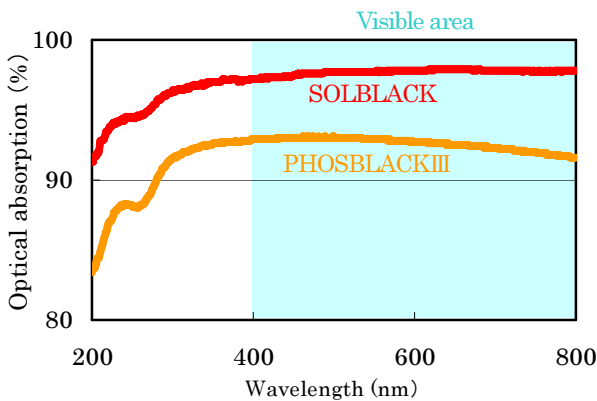
L* : Blightness (Black 0 ~ 100 white)

a* : Color (Green — ↔ + Red)

b* : Color (Blue — ↔ + Yellow)

Optical absorption

Optical absorption was calculated from total reflection measuring result.



SOLBLACK absorb 98% of visible light

Heat collecting test

Heat collecting was observed by water temperature changes in the pipe.

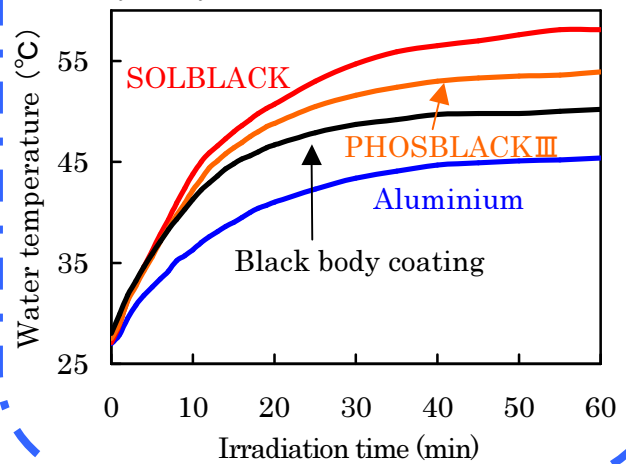
Measurement condition

Light source : 50W Light distance : 10cm

Material of pipe : Aluminium

(φ 15mm * L100mm)

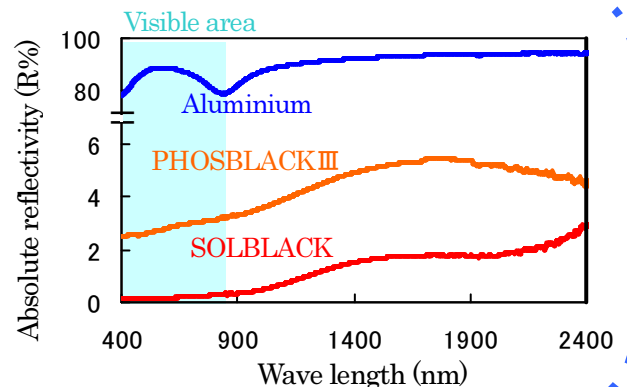
Quantity of water : 8mL



Absolute reflectivity ※

Absolute reflectivity was measured by spectrophotometer at 12° .

SOLBLACK was showed high absorption from visible area to infrared area.



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