

SHINYANG ENERGY

SAPE12

for Renewable Energy



Company Information

SHINYANG ENERGY Inc. contributes to spreading various renewable energy on the globe through developments of such efficient products as absorption plate, solar collector, geothermal heat pump, air source heat pump, etc., and is one of excellent reliable companies(www.syenergy.co.kr) in Korea with mass production facilities of absorption plate, solar collectors, etc.

Since 2007, our R&D Center has made an vigorous efforts to develop the unprecedented technology by in-house experts and now, we have many patents and certificates of NT (New Technology), NEP (New Excellent Product) authenticated by government.

In the near future, we have the visions of SY 2020 that we take the extensive view of 100 million dollars income at manufacture and applications in the field of new & renewable energy.

Just now, we try to expand our business through overseas export and domestic market with innovative electroplating technology and equipments of solar absorbers (SAPE12) to maximize absorption of solar energy while minimizing thermal emission for facade applications.

We will also make greater efforts that our state-of art technologies to harness solar thermal and geothermal energy will be rapidly provided to customers in domestics and overseas for good partnerships.

Products

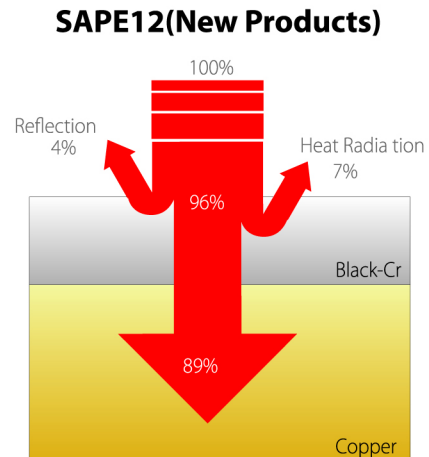
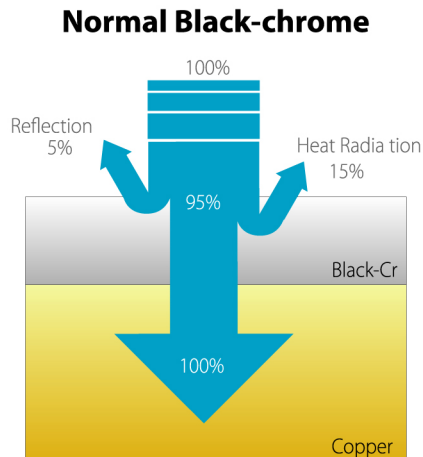
Absorber SAPE12

As a core part of solar collect, SAPE12 has been made by selective coating using main property of black chrome, with the features of absorptance of $0.96(\pm 0.1)$, emittance of $0.07(\pm 0.1)$ and melting point of 450°C . and has been quality-controlled by ISO 9001 for outstanding homogeneity of the coating over the entire width, so that it has the extraordinary stability in long term and highest thermal efficiency in any environment and climates. It can be to provide various shape and size by the needs of customers.

To be applied the Absorber SAPE12 with high absorptance and low emittance of solar radiation, it is possible to capture the 89% of solar energy compared to 80% for normal absorber.

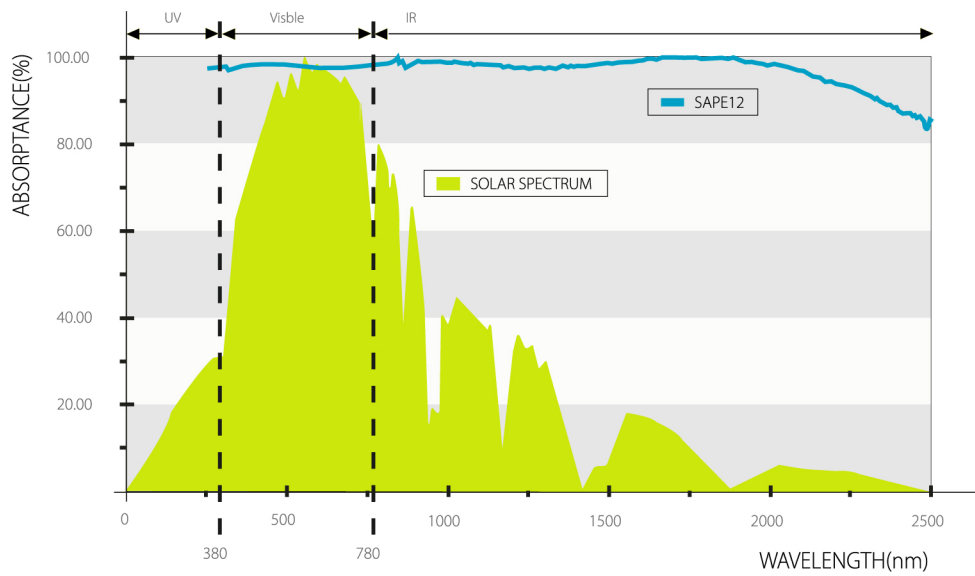


Surface Structure & Efficiency of SAPE12



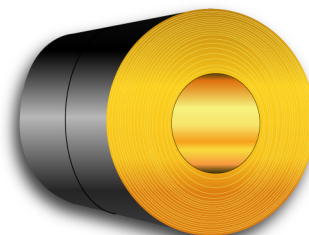
Absorptance of SAPE12

SAPE12 has been improved the absorption of infrared rays in solar spectrum compared with the normal absorber, with the applications of the new electroplating patent technology authenticated by the office patent of administration of Korea.



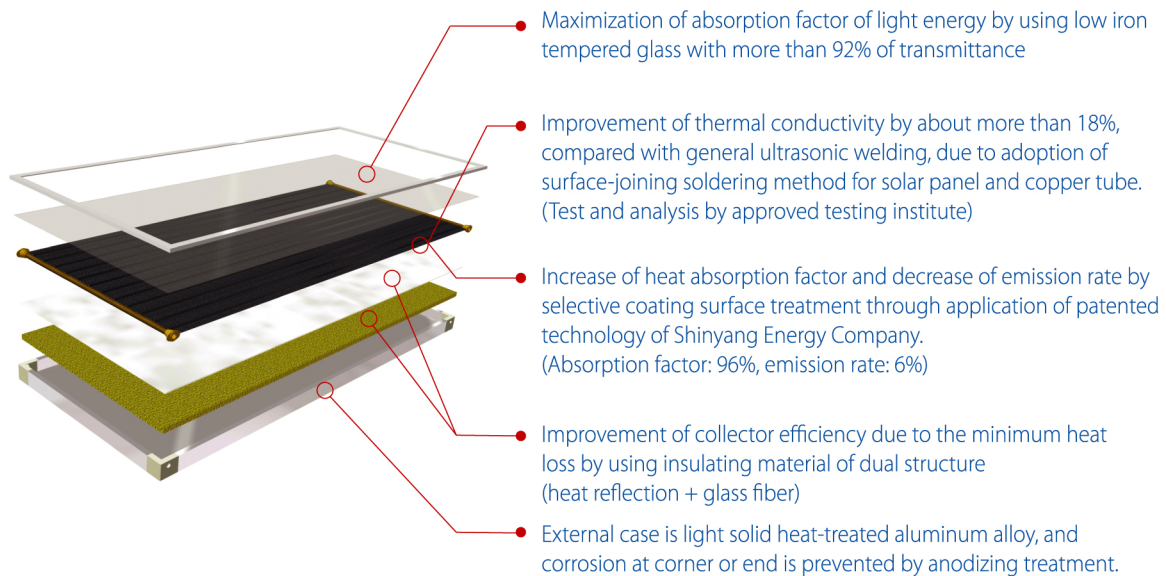
Quality Standard of SAPE12

Models	SAPE12
Metal Substrate	99.9% pure copper
Solar Absorptance	96% \pm 1
Thermal Emittance	7% \pm 1

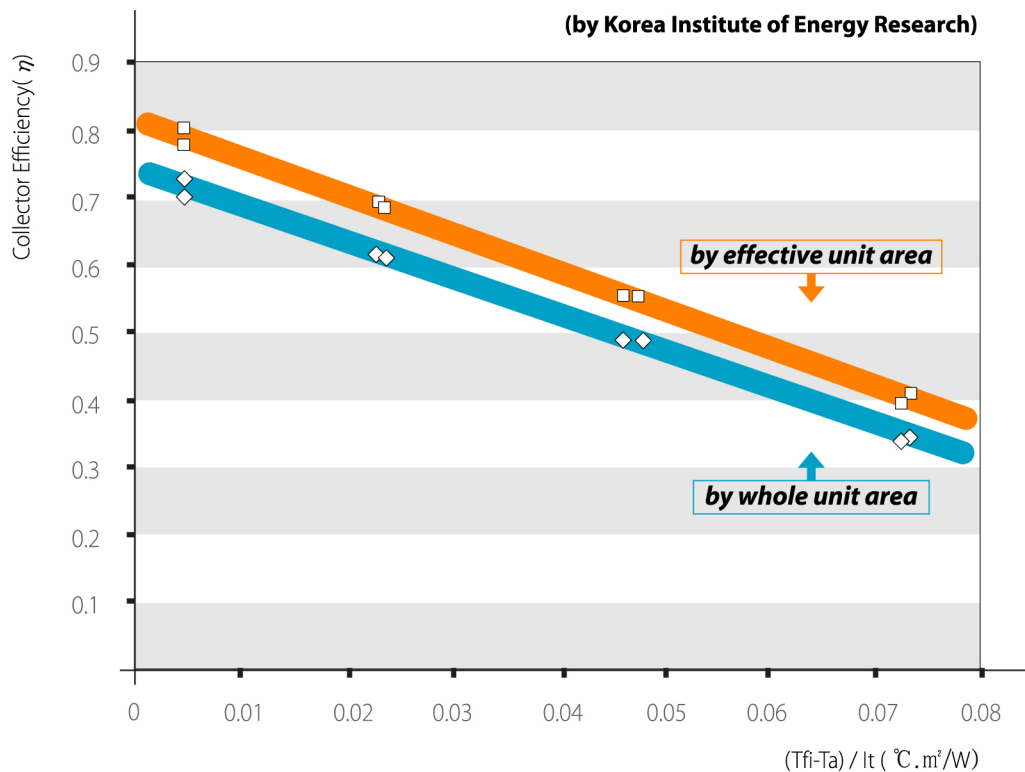


Standard Model of Solar Collector(SSCE-2000)

It is used to solar-heat-harnessing system for house, building, pool, etc. with the specification of dimension size of 1000 x 2000 x 80 (mm), collecting area of 2.0 m², weight of 39kg, type of flat plate liquid-heating, operating temperature of -30~190℃, maximum allowable pressure of 8kg/cm², and operating heat transfer medium of propylene-glycol aqueous solution.



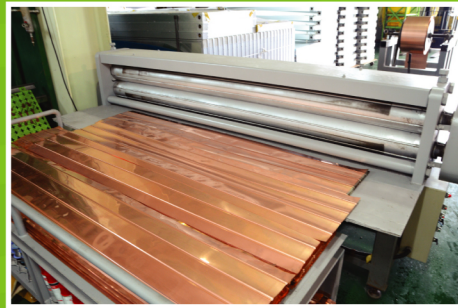
Efficiency of Absorptance (SSCE-2000)



Process & Facilities



Electroplating Process



Forming Process



Soldering Process



Welding Process

Application



Pools



Athletic Stadium



Buildings



Factory

SHINYANG ENERGY



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