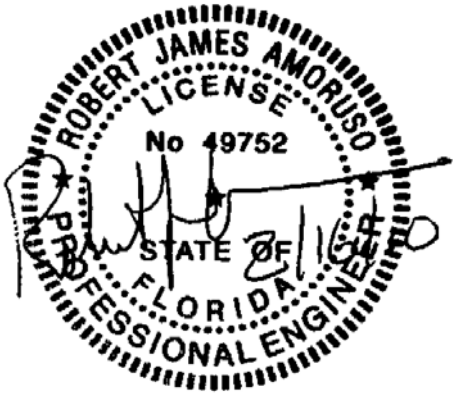
P T C, LLC

Product Evaluation Report

Date:	February 16, 2010
PTC Report #:	1576
Revision No.:	0
PTC Project #:	310-0101
Product Mfg.:	Natural Light Energy Systems 10821 N. 23rd Ave. Phoenix, AZ 85029
Product Name:	Roof Mounted Solar Attic Fan
Product Category:	Roofing
Product Sub-Category:	Roofing Accessories that are an Integral Part of the Roofing System
Compliance Method:	Product Approval Rule 9B-72.070(1)(d)
Code Compliance:	2007 Florida Building Code, Section 1517.6 & R4402.6.6 and TAS 100(a)-95
Prepared For:	Natural Light Energy Systems 10821 N. 23rd Ave. Phoenix, AZ 85029
Prepared By:	Robert J. Amoruso, P.E. Florida P.E. No. 49752 PTC, LLC 1535 N. Cogswell St., Ste. C25 Rockledge, Florida 32955 Florida CofA No. 25935



SCOPE

PTC, LLC was contracted by Natural Light Energy Systems to perform an engineering analysis and product evaluation of their Roof Mounted Solar Attic Fan to the 2007 FBC including those sections of the code pertaining to the High Velocity Hurricane Zone.

The engineering analysis (Reference 3.a) determines the anchorage of the product to the roofing substrate and the product evaluation report (this document) summarizes 2007 FBC compliance and appropriate Limitations and Conditions of Use.

ROOF MOUNTED SOLAR ATTIC FAN DESCRIPTION

The solar attic fan is a roof mounted system with a 12 inch diameter fan enclosed in a self-flashing base unit. The fan unit shroud also encloses a stainless steel mesh rodent and bird guard and a DC Motor. Other attributes are listed below. See Reference 1.a Roof Mounted Solar Attic Fan drawing for more details. An adjustable solar panel mounted on top of the fan shroud powers the DC motor.

Adjustable Solar Panel
The solar attic fan is designed with a mounting bracket that houses the solar panel allowing the panel to be angled for optimum performance.

Aluminum Flashing
Natural Light solar attic fan flashings are manufactured from 0.080 gauge 1100 Series aluminum.

Aluminum Hood
Natural Light solar attic fan hoods are manufactured from 0.080 gauge 1100 Series aluminum.

LIMITATIONS AND CONDITIONS OF USE

1. Refer to applicable building code for required ventilation.
2. The roof mounted solar attic fan shall be mounted per the manufacturer's instructions and secured to the roofing substrate in accordance with Drawing No. NLS0004 (Reference 1.a).
3. The product is for installations on asphalt shingle roofs as tested in Reference 2.a.
4. The Natural Light Energy Systems Roof Mounted Solar Attic Fan shall not be installed on roof mean heights greater than 33 feet in accordance with TAS 100(a)-95, Section 11.1.2 Wind-Driven Rain Testing as documented in testing (Reference 2.a).
5. The solar attic fan tested used a 40 watt solar panel. 10, 20 and 30 watt solar panels are enveloped due to identical bracket and anchorage methods employed.
6. When used as an accessory in a roofing assembly, it shall meet the requirements of the 2007 FBC – Building, Chapter 15 and/or 2007 FBC – Residential, Chapter 9.

QUALITY ASSURANCE

This product is manufactured under a quality assurance program audited by an approved quality assurance entity through **National Accreditation & Management Institute, Inc. (NAMI)**. See FBC Organization No. QUA 1789 for approval under Rule 9B-72.

SUPPORTING DOCUMENTS

1. Drawings
    a. Drawing No. NLS0004, Rev. 0, Dated 2/9/10, signed and sealed by Robert J. Amoruso, P.E.

2. Testing
    a. PRI Construction Materials Technologies Test Report No. NLES-001-02-02, dated 12/30/09, *Performance Test Report; Natural Light Systems – 40 Watt Solar Attic Fan for Asphalt Shingle Roofs*.

3. Calculations
    a. PTC, LLC Report No. 1573, Dated 2/1/10, *Anchor Calculations into Wood Installation.*

4. References
    a. Testing (Ref. 2.a)
        i. Testing Application Standards (TAS), Chapter No. 100(a)-95 - Test Procedure for Wind and Wind Driven Rain Resistance and/or Increased Windspeed Resistance of Soffit Ventilation Strip and Continuous or Intermittent Ventilation System Installed At the Ridge Area. Evaluation (Ref. 3.a)
    b. 2007 Florida Building Code

APPLICATIONS/INSTALLATIONS OUTSIDE THE LIMITATIONS AND CONDITIONS OF USE

Rule 9B-72.070(1)(e) states “Rational engineering analysis cannot be used in lieu of a standard test required by the Code for approval of products within the scope of the standard, except that project specific approval by the local authorities having jurisdiction in accordance with alternate methods and materials authorized in the Code.”

Any modification to this product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others. As allowed in Rule 9B-72.070(1)(e), a project specific approval by the local authorities having jurisdiction may be used given an appropriate rational analysis is conducted and deemed acceptable to the local authorities having jurisdiction.