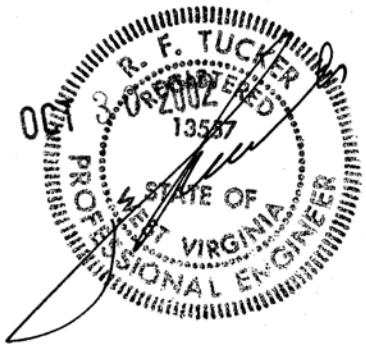
OLIVER TECHNOLOGIES, INC.
INSTALLATION INSTRUCTIONS FOR
CONCRETE RUNNER / FOOTERS
MODEL 1100 I C "V" SERIES WIND ZONE I
ALL STEEL FOUNDATION SYSTEM PATENT PENDING
MODEL 1100 I C "V" (ALL STEPS)
MODEL 1100 I LC "V" LONGITUDINAL ONLY: steps 1-7
MODEL 1100 I TC "V" LATERAL ONLY steps 1, 8-11



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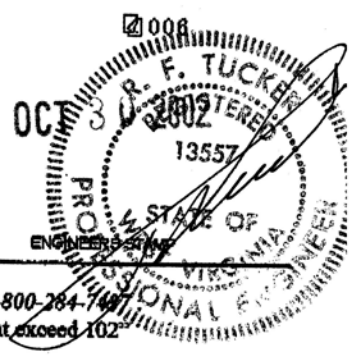
ENGINEERS STAMP



SPECIAL CIRCUMSTANCES: If the following conditions occur - *STOP! Contact Oliver Technologies at 1-800-284-7437*
a) System height exceeds 48" **b)** Length of home exceeds 76' **c)** Roof eaves exceed 16" **d)** Sidewall height exceed 102"
e) Roof Pitch greater than 4.37/12 (20 degrees) **f)** Location is within 1500 feet of coast

INSTALLATION OF CONCRETE RUNNER / FOOTER BRACKETS

Model 1100 I TC "V" and 1100 I LC "V" are component versions of the full 1100 I C "V" System and can be installed independently. The 1100 I TC "V" offers wind force resistance in the transverse (lateral) direction only and the 1100 I LC "V" offers wind force resistance in the longitudinal direction only.

The concrete runner/footer may be poured either transverse or longitudinal. Its width shall provide a minimum of 6" for drilled in wedge bolt (dry set) anchors or 6" for 1100-JCA anchors (wet set), from any anchor bolt to any concrete edge or end. The concrete shall be a minimum of 441 sq. inches and 6" thick. The concrete shall be minimum 2500 psi mix (pre-blended sacked concrete mix is acceptable) . Special inspection of the anchor installations is not required.

Both systems shall be located not closer than 6" from center of bracket to edge of footing. The transverse brackets for both wet and dry set applications are to be installed the same but need to be located a maximum of 18" from a pier if not used with the Model #1100 I LC " V" system.

INSTALLATION OF LONGITUDINAL CONCRETE "V" BRACE SYSTEM

NOTE: USE OF THIS SYSTEM ELIMINATES ALL LONGITUDINAL ANCHORS, STABILIZER PLATES, AND FRAME TIES. THE HOME MUST BE INSTALLED ACCORDING TO THE HOME MANUFACTURERS INSTRUCTIONS.

SPECIAL NOTE: The longitudinal "V" brace system serves as a pier under the home and should be loaded as any other pier. It is recommended that after leveling piers, and one-half inch (1/2") before home is lowered completely on to piers, complete items 1 through 7 below or drive frame bracket (F) toward center of concrete "V" bracket (J).

1. When using the 1100(wet set)JCA bracket, simply install the bracket in runner/footer **OR**
   When installing in cured concrete use the 1100(dry set) CA bracket. The 1100 (dryset) CA bracket is attached to the concrete using (2) 1/2" x 4" concrete wedge bolts. Place the CA bracket in desired location. Mark bolt hole locations, then using a 1/2" diam. masonry bit, drill a hole to a minimum depth of 4". Make sure all dust and concrete is blown out of the holes. Place wedge bolts into drilled holes, then place 1100 (dry set) CA bracket onto wedge bolts and start wedge bolt nuts. Take a hammer and lightly drive the wedge bolts down by hitting the nut (making sure not to hit the top of threads on bolt). The sleeve of concrete wedge bolt needs to be at or below the top of concrete. Complete by tightening nuts.
2. Place concrete "V" bracket (J) directly below chassis I-beam .
3. Select the correct square tube brace (E) length for set-up (pier) height at support location. **SEE PIER HEIGHT TABLE ON PAGE 2**
4. Install both of the 1.50" square tubes (E) into the concrete "V" bracket (J), insert carriage bolt and leave nut loose for final adjustment.
5. Place I-beam connector (F) loosley on the bottom flange of the I-beam.
6. Attach the selected 1.5" tubes (E) to the I-beam connectors (F) and fasten loosely with bolts and nuts. Note: The angle is not to exceed 60 degrees and not less than 40 degrees. The concrete V bracket (J) is stamped with the angles to verify correct degree. Use proper length tube or cut and drill tube to achieve proper length.
7. Tighten all bolts. With standard hand tools.

INSTALLATION OF LATERAL CONCRETE TELESCOPING ARM

NOTE: THE MODEL 1100 I TC "V" (LATERAL PROTECTION) ELIMINATES THE NEED FOR MOST ANCHORS, STABILIZER PLATES & FRAME TIES.

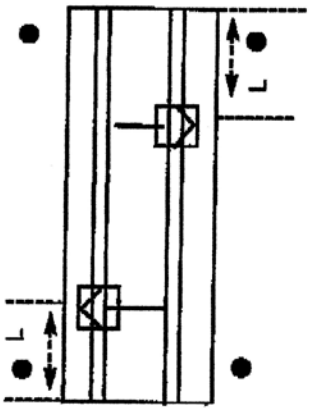
SPECIAL NOTE: **When installing just the 1100 I TC "V"** Installation of this system on single wide homes will require the installation of four (4) ground anchors with tie-down straps, one at each corner of the house, or one at each point that is 1/4 of the length from the ends of the home. Ground anchor and tie-down straps to be rated for min. 3150 lbs. Installation of the 1100 IC "V" or the 1100 ILC "V" on single wide homes eliminates the need for these four (4) anchors.

8. Select the correct square tube brace (H) length for set-up lateral transverse at support location. The lengths come in either 60" or 72" lengths. (With the 1.50" tube as the bottom tube, and the 1.25" tube as the inserted tube.)
9. Install the 1.50 transverse brace (H) to the concrete U bracket transverse connector (D) with bolt and nut.
10. Slide 1.25" transverse brace into the 1.50" brace and attach to adjacent I-beam connector (I) with bolt and nut.
11. Secure 1.50" transverse arm to 1.25" transverse arm using four (4) 1/4" - 14 x 3/4" self-tapping (tek) screws in pre-drilled holes.

REVISED INSTRUCTIONS 8/9/02

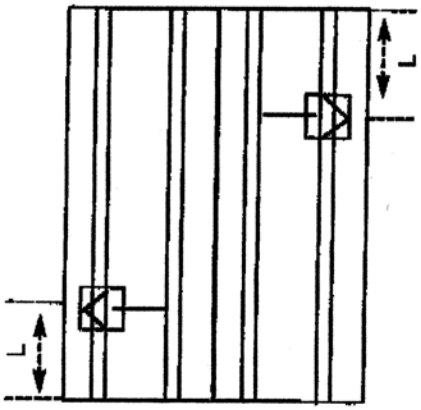
REQUIRED NUMBER AND LOCATION OF MODEL 1100 IC "V" BRACES WIND ZONE I

SINGLE SECTION



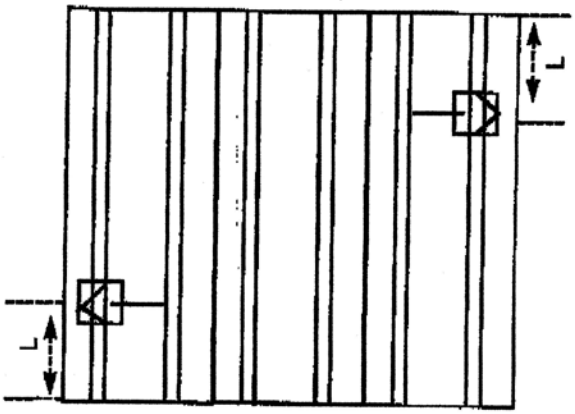
SINGLE SECTION ALL WIDTHS UP TO 76'

DOUBLE WIDES



DOUBLE WIDES ALL WIDTHS UP TO 76'

TRIPLE WIDES

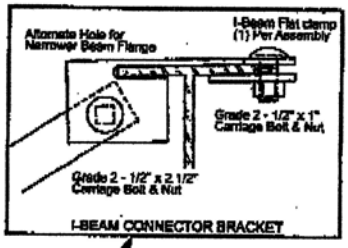


TRIPLE WIDES ALL WIDTHS UP TO 76'

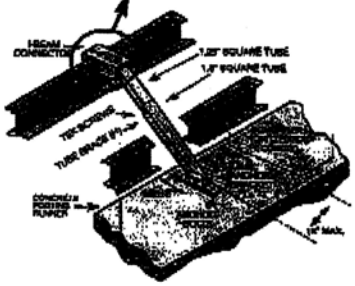
Recommendations: It is recommended that systems be installed at 2nd pier in from end of home, not to exceed 1/4 length of the house.

NOTES:

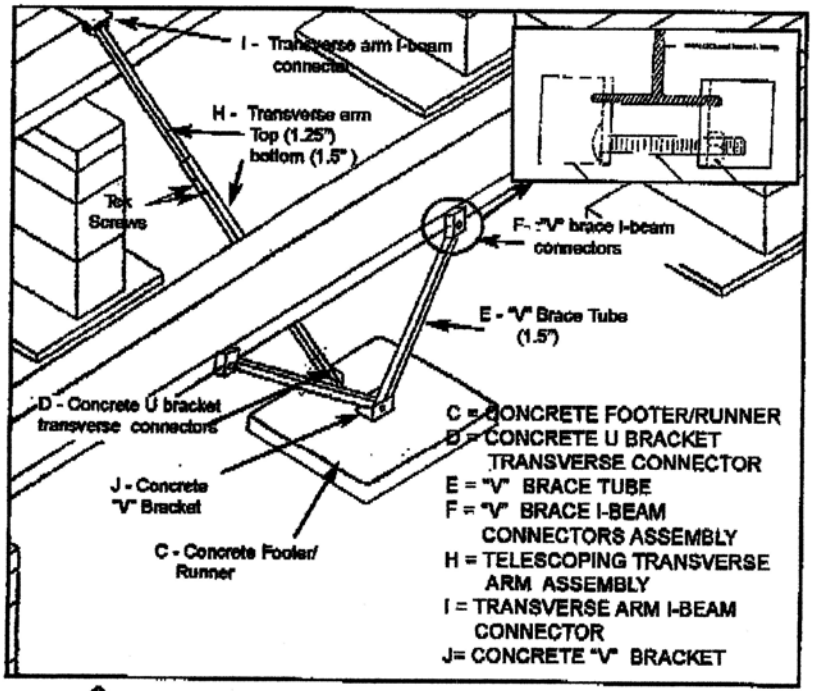
1. LENGTH OF HOUSE IS THE ACTUAL *BOX SIZE*
2. L = APPROXIMATE LOCATION OF THE SYSTEM (SEE RECOMMENDATION)
3.  = LOCATION OF ASF MODEL 1100 IC "V" (LATERAL & LONGITUDINAL BRACING). OR 1100 ITC "V" (LATERAL ONLY)
4. ● = INSTALLATION OF SINGLE WIDE HOMES REQUIRE 2 ANCHORS PER SIDE (WITH A MINIMUM OF 3150 LOAD RATING)



I-BEAM CONNECTOR BRACKET



Model # 1100 I TC "V"



PIER HEIGHT (approx. 40-60degrees maximum)	1.50" Tube Length
14" to 19"	20"
18" to 25"	28"
24" to 35"	39"
30" to 40"	44"
36" to 48"	54"

FOR STATE OF ALABAMA ONLY:

1. Maximum pier height is limited to 32" with pier defined in the Alabama Regulation as " that portion of the support system between the top of the footing and the bottom of the pier cap."
2. The State of Alabama limits the use of this system to H.U.D labeled homes.

MANUFACTURED HOUSING FOUNDATION SYSTEMS
A DIVISION OF OLIVER TECHNOLOGIES, INC.
1-800-284-7437

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Fax: 931-796-8811 13557
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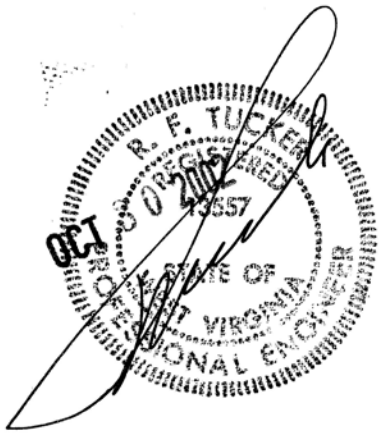
INSTALLATION INSTRUCTIONS FOR THE
MODEL 1100 I "V" SERIES WIND ZONE I
ALL STEEL FOUNDATION SYSTEM PATENT PENDING
MODEL 1100 I"V" (STEPS 1-12)
MODEL 1100 I T "V" TRANSVERSE ONLY:
FOLLOW INSTRUCTIONS 1-3 , 9-12



ENGINEERS STAMP

OLIVER TECHNOLOGIES, INC.
INSTALLATION INSTRUCTIONS FOR THE
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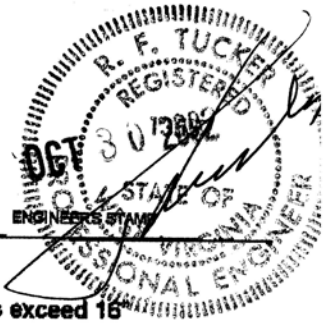
ALL STEEL FOUNDATION SYSTEM PATENT PENDING
MODEL 1100 I "V" (STEPS 1-12)
MODEL 1100 I T "V" TRANSVERSE ONLY:
FOLLOW INSTRUCTIONS 1-3 , 9-12



1. SPECIAL CIRCUMSTANCES: If the following conditions occur - *STOP! Contact Oliver Technologies at 1-800-284-7437* : a) System height exceeds 48" b) Length of home exceeds 76' c) Roof eaves exceed 16" d) Sidewall height exceed 96" e) Roof Pitch greater than 4.37/12 (20 degrees) f) Location is within 1500 feet of coast g) Footing to surface area exceeds 3 square feet h) Soil conditions less than 4B

INSTALLATION OF GROUND PAN

2. Remove weeds and debris in an approximate two foot square to expose firm, level undisturbed soil or controlled fill for each ground pan (C) . Ground pan must be installed at or below frost line or per local jurisdiction.

3. Place ground pan (C) directly below chassis I-beam . Press or drive pan firmly into soil until flush with or below soil. **SPECIAL NOTE:** The longitudinal "V" brace system serves as a pier under the home and should be loaded as any other pier. It is recommended that after leveling piers, and one-half inch (1/2") before home is lowered completely on to piers, complete items 4 through 8 below or drive frame bracket (F) toward center of pan.

INSTALLATION OF LONGITUDINAL "V" BRACE SYSTEM

NOTE: USE OF THIS SYSTEM ELIMINATES ALL LONGITUDINAL ANCHORS, STABILIZER PLATES, AND FRAME TIES. THE HOME MUST BE INSTALLED ACCORDING TO THE HOME MANUFACTURERS INSTRUCTIONS.

4. Select the correct square tube brace (E) length for set - up (pier) height at support location.

PIER HEIGHT (Approx. 40 - 60 degrees Max.)	1.50" Tube Length
14" to 19"	20"
18" to 25"	28"
24" to 35"	39"
30" to 40"	44"
36" to 48"	54"

FOR STATE OF ALABAMA ONLY: 1. Maximum pier height is limited to 32" with pier defined in the Alabama Regulation as " that portion of the support system between the top of the footing and the bottom of the pier cap." 2. The State of Alabama limits the use of this system to H.U.D labeled homes.

5. Install both of the 1.50 " square tubes (E) into the "U" bracket (J), insert carriage bolt and leave nut loose for final adjustment.

6. Place I-beam connector (F) loosley on the bottom flange of the I-beam.

7. Attach the selected 1.5" tubes (E) to the I-beam connectors (F) and fasten loosely with bolts and nuts. Note: The angle is not to exceed 60 degrees and not less than 40 degrees. The V bracket (J) is stamped with the angles to verify correct degree. Use proper length tube or cut and drill tube to achieve proper length.

8. Tighten all bolts. With standard hand tools.

INSTALLATION OF LATERAL TELESCOPING TRANSVERSE ARM SYSTEM

NOTE: THE MODEL 1100 I T "V" (LATERAL PROTECTION) ELIMINATES THE NEED FOR MOST ANCHORS, STABILIZER PLATES & FRAME TIES.

9. Select the correct square tube brace (H) length for set-up lateral transverse at support location. The lengths come in either 60" or 72" lengths. (With the 1.50" tube as the bottom tube, and the 1.25" tube as the inserted tube.)

10. Install the 1.50 transverse brace (H) to the ground pan connector (D) with bolt and nut.

11. Slide 1.25" transverse brace into the 1.50" brace and attach to adjacent I-beam connector (I) with bolt and nut.

12. Secure 1.50" transverse arm to 1.25" transverse arm using four (4) 1/4" - 14 x 3/4" self-tapping screws in pre-drilled holes.

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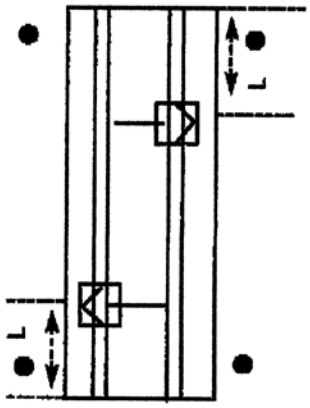
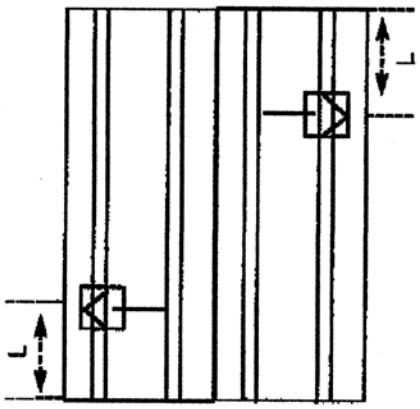
REQUIRED NUMBER AND LOCATION OF MODEL 1100 I "V" BRACES WIND ZONE I

SINGLE SECTION



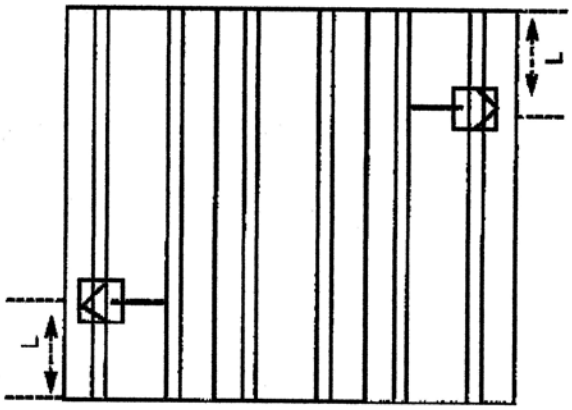
SINGLE SECTION ALL WIDTHS UP TO 76'

DOUBLE WIDES



DOUBLE WIDES ALL WIDTHS UP TO 76'

TRIPLE WIDES



TRIPLE WIDES ALL WIDTHS UP TO 76'

Recommendations: It is recommended that systems be installed at 2nd pier in from end of home, not to exceed the 3rd pier of the house.

NOTES:

1. LENGTH OF HOUSE IS THE ACTUAL *BOX SIZE*
2. L = APPROXIMATE LOCATION OF THE SYSTEM (SEE RECOMMENDATION)
3.  = LOCATION OF ASF MODEL 1100 I "V" (LATERAL & LONGITUDINAL BRACING). OR 1100 I T(LATERAL ONLY)
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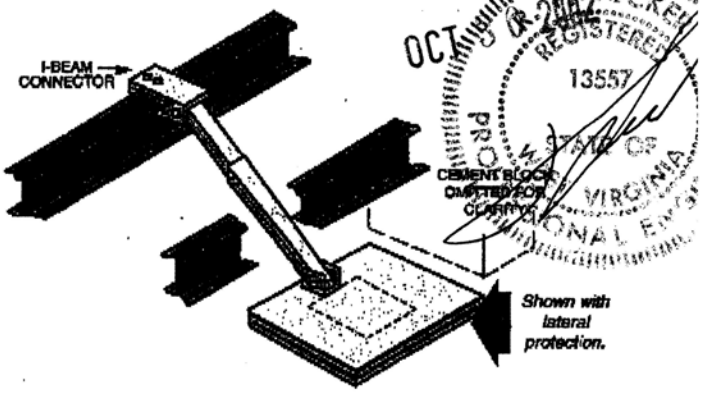
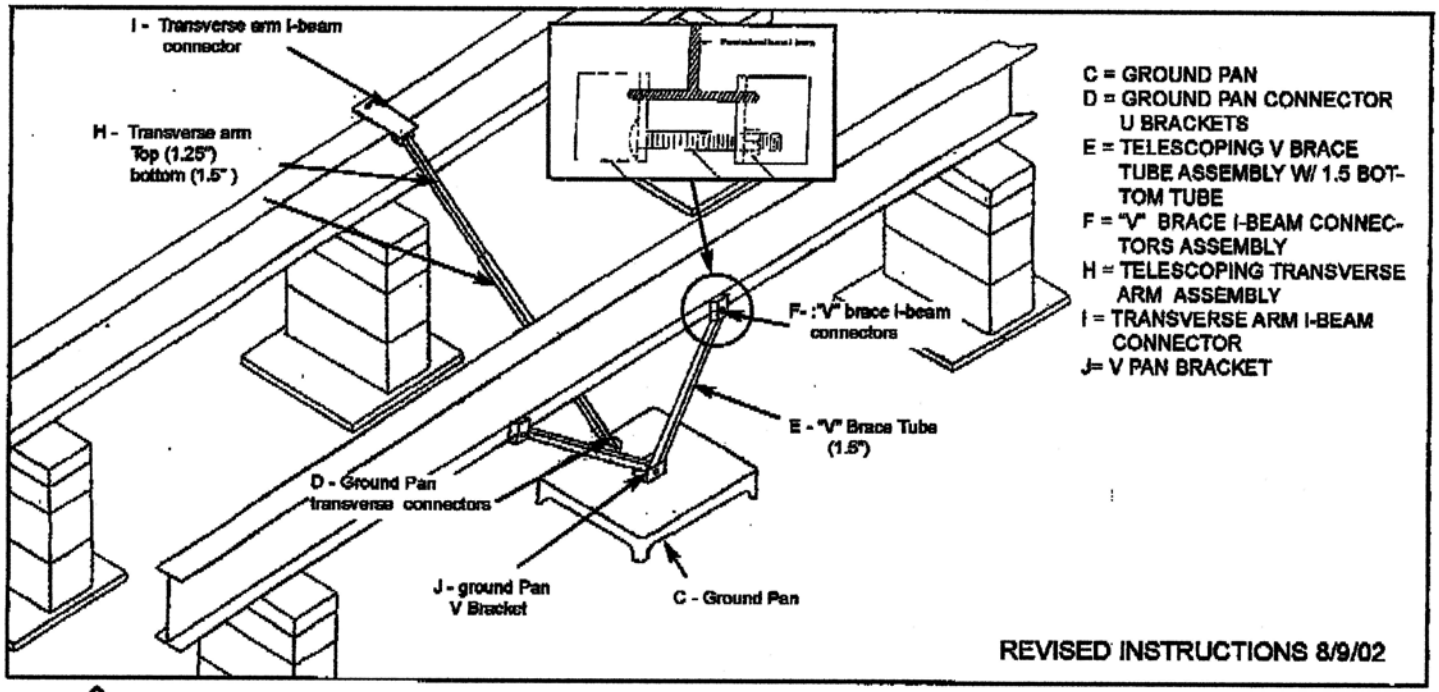


Model # 1100 I T "V"



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