EXHIBIT G

Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838)

Patent:	7,781,789 ("'789 patent")
Title:	Transparent mirrorless light emitting diode
Inventors:	Steven P. DenBaars, Shuji Nakamura, James S. Speck
Description:	Great Value LED Deco Vintage Edison Light Bulb 4
	Watt 2-pack, Model CAD4W22G-2P (Walmart #
	555602838)

SUMMARY

The below analysis of a Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) purchased from Walmart demonstrates that this product, and all other products that include filament LEDs not more than colorably different from the filament LEDs in this product, infringe at least claims 3 and 28 of the '789 patent under 35 U.S.C. § 271(a) and at least claims 31 and 56 of the '789 patent under 35 U.S.C. § 271(g).

Optical and x-ray images of one extracted filament LED are provided. A portion of the filament LED was cut and potted in epoxy mount. It was mechanically polished and analyzed by SEM-EDS technique.

X-ray Imaging

Acquired on Nordson DAGE Quadra 7 X-ray system

SEM Imaging and SEM-EDS Spectroscopy

The sample was potted in a typical epoxy mount and cured overnight. It was polished mechanically to expose the relevant structures in cross-section. The sample was sputter coated with a thin layer of Ir (a few nms thick) to reduce charging under electron beam during SEM observations and SEM-EDS analysis. SEM images were acquired in Secondary Electron (SE) and Back Scatter Electron (BSE) mode on a FEI Quanta FEG-SEM. Energy Dispersive X-ray spectra (EDS) were acquired from several regions of interest to identify the matrix level elemental constituents. This analysis was performed using Oxford Instruments X-Max system running INCA software and installed on the SEM above.

'789 Patent Claims	Corresponding Product Features
Claim 1	
1. An opto-electronic device, comprising:	The Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) is an opto-electronic device.

Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838)

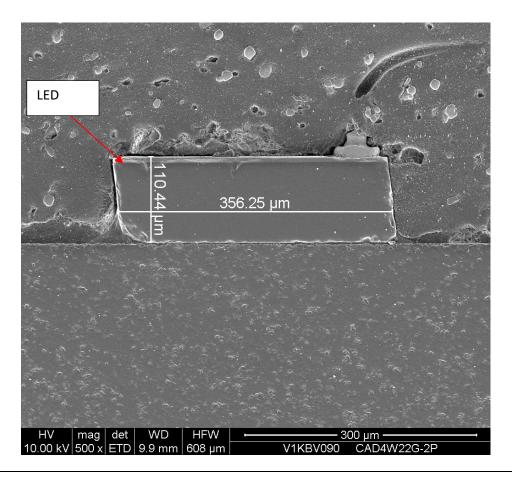
'789 Patent Claims **Corresponding Product Features** a light emitting diode (LED) The Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) that emits light out of the includes a light emitting diode (LED) that emits light out of the LED from multiple sides of the LED. Below are images LED from multiple sides of of a filament LED taken from this product and turned on to show LEDs emitting light out of multiple sides of the the LED, LEDs. Filament LED Side 1 Side 2

Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838)

'789 Patent Claims

Corresponding Product Features

wherein all layers of the LED are transparent for an emission wavelength except for an emitting layer. The Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) includes LEDs in which all layers of the LED are transparent for an emission wavelength except for an emitting layer. Below are SEM images and SEM-EDS spectra of one of the LEDs confirming that all layers are transparent materials. The presence of an emitting layer is confirmed by the emission of light by the LED. The emitting layer is not transparent for an emission wavelength because the photon energy is almost the same as the band-gap energy of the emitting layer resulting in reabsorption of the emitted light. *See, e.g.,* '789 patent at 4:60-5:7.



'789 Patent Claims	Corresponding Product Features
	The presence of an emitting layer is confirmed by the emission of light by the LED. Below are images of a filament LED taken from this product and turned on to show LEDs emitting light.
	Filament LED
	LEDs emitting light LEDs emitting light

Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838)

'789 Patent Claims **Corresponding Product Features** The gallium nitride (GaN) layers of the LED are transparent for an emission wavelength. Spectrum 1 (top right panel) shows the elemental constituents of a layer of the LED (top left panel) as obtained from SEM-EDS analysis. As shown in Spectrum 1 (top right panel), the element Gallium (Ga) is present in the LED layer (top left panel), which is consistent with the LED comprising Gallium Nitride (GaN). Spectrum 2 (bottom right panel) shows the elemental constituents of a layer of the LED (bottom left panel) as obtained from SEM-EDS analysis. As shown in Spectrum 2 (bottom right panel), the elements Gallium (Ga) and Nitrogen (N) are present in the LED layer (bottom left panel), which is consistent with the LED comprising Gallium Nitride (GaN). Full Scale 1067 cts Cursor: 2.374 (22 cts) Spectrum 2 Full Scale 1120 cts Cursor: 6.153 (6 cts)

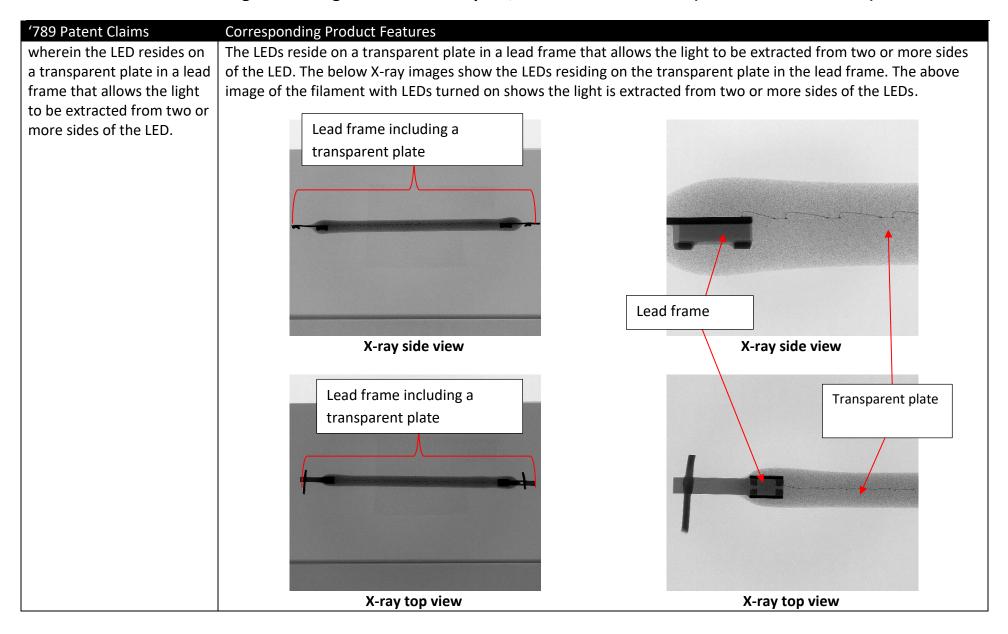
'789 Patent Claims	Corresponding Product Features The LED growth substrate is transparent sapphire (Al_2O_3). Spectrum 2 (right panel) shows the elemental constituents of the LED growth substrate (left panel) as obtained from SEM-EDS analysis. As shown in Spectrum 2 (right panel), the elements Aluminum (Al) and Oxygen (O) are present in the LED growth substrate (left panel), which is consistent with the LED growth substrate comprising sapphire (Al_2O_3).
	Spectrum 2 Spectrum 2 Spectrum 3 Spec
	The top thin film of the LED is InSnO or Indium Tin Oxide, frequently referred to as ITO, a transparent conductive oxide used in gallium nitride-based LEDs. Spectrum 1 (right panel) shows the elemental constituents of the top thin
	film of the LED (left panel) as obtained from SEM-EDS analysis. As shown in Spectrum 1 (right panel), the elements Indium (In) and Oxygen (O) are present in the top thin film of the LED (left panel), which is consistent with the top thin film comprising Indium Tin Oxide (InSnO).
	Spectrum 3 Describings 1 U.S. 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 8 6.5 7 7.5 8 Full Scale 728 cts Cursor 6.466 (9 cts) Rectardings 1

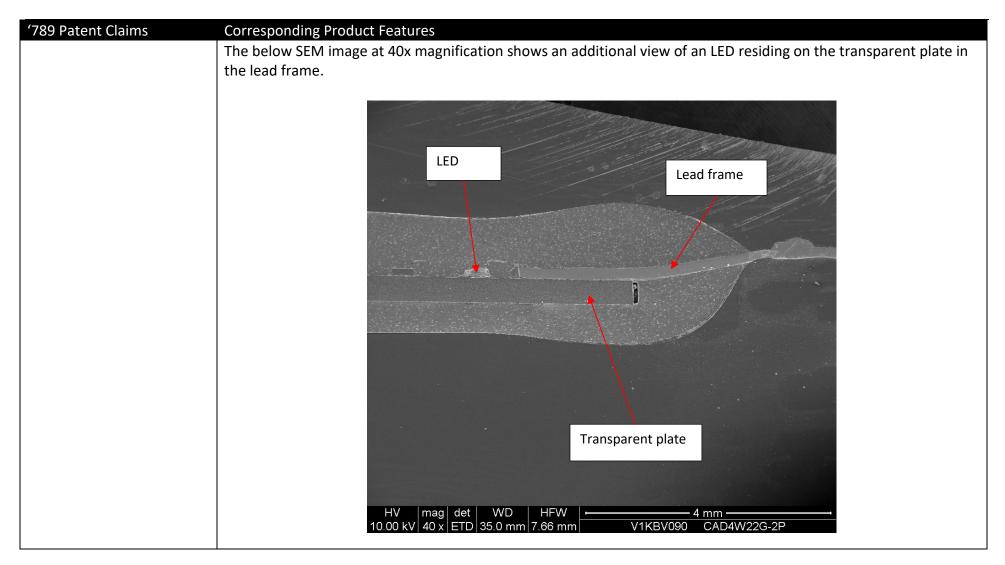
'789 Patent Claims	Corresponding Product Features
Claim 3	
3. The opto-electronic device of claim 1, wherein one or more layers of the LED are shaped, patterned, textured or roughened to increase the light extraction.	One or more layers of LED are shaped, patterned, textured or roughened to increase the light extraction.

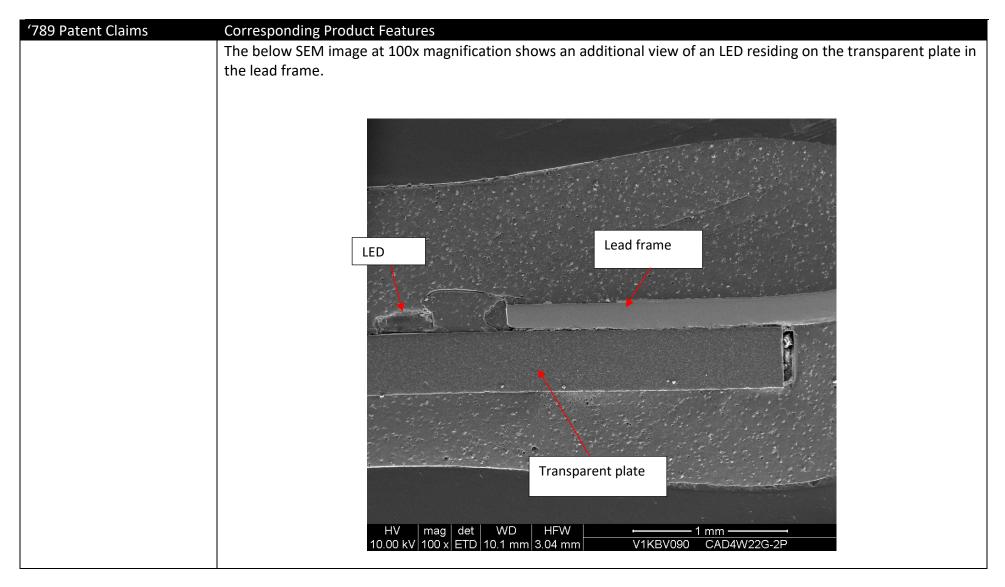
'789 Patent Claims	Corresponding Product Features
Claim 28	
28. An opto-electronic device, comprising:	The Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) is an opto-electronic device.

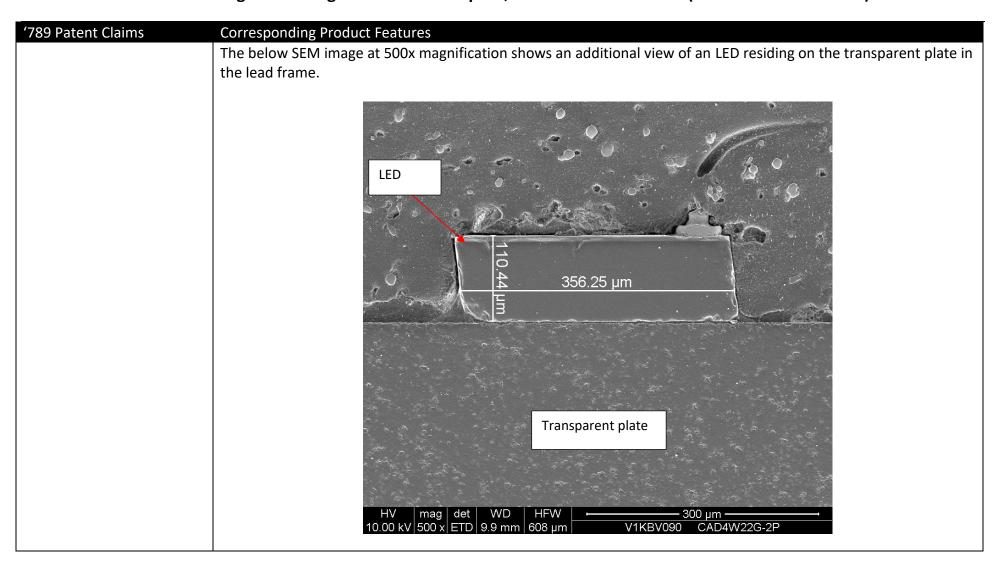
Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838)

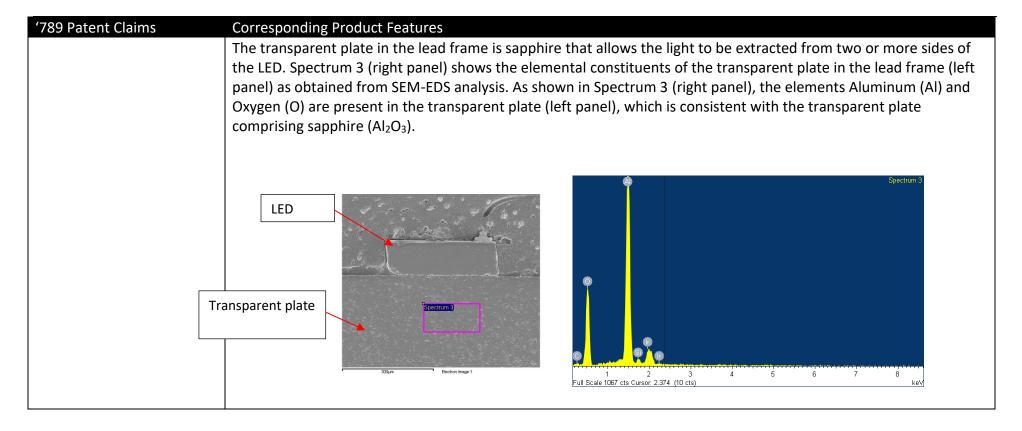
'789 Patent Claims **Corresponding Product Features** a light emitting diode (LED) The Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) that emits light out of the includes a light emitting diode (LED) that emits light out of the LED from multiple sides of the LED. Below are images LED from multiple sides of of a filament LED taken from this product and turned on to show LEDs emitting light out of multiple sides of the the LED, LEDs. Filament LED Side 1 Side 2











'789 Patent Claims	Corresponding Product Features
Claim 29	
29. A method of fabricating an opto-electronic device, comprising:	The Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) is an opto-electronic device made by the claimed method.

Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838)

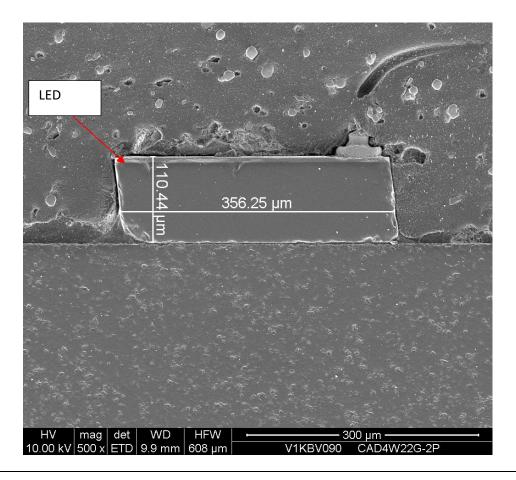
'789 Patent Claims **Corresponding Product Features** creating a light emitting The Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) is diode (LED) that emits light made by a method that includes creating a light emitting diode (LED) that emits light out of the LED from multiple out of the LED from sides of the LED. Below are images of a filament LED taken from this product and turned on to show LEDs emitting multiple sides of the LED, light out of multiple sides of the LEDs. Filament LED Side 1 Side 2

Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838)

'789 Patent Claims

Corresponding Product Features

wherein all layers of the LED are transparent for an emission wavelength except for an emitting layer. The Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) is made by a method that includes creating LEDs in which all layers of the LED are transparent for an emission wavelength except for an emitting layer. Below are SEM images and SEM-EDS spectra of one of the LEDs confirming that all layers are transparent materials. The presence of an emitting layer is confirmed by the emission of light by the LED. The emitting layer is not transparent for an emission wavelength because the photon energy is almost the same as the band-gap energy of the emitting layer resulting in reabsorption of the emitted light. *See, e.g., '789* patent at 4:60-5:7.



'789 Patent Claims	Corresponding Product Features
	The presence of an emitting layer is confirmed by the emission of light by the LED. Below are images of a filament
	LED taken from this product and turned on to show LEDs emitting light.
	1
	Filament LED
	LEDs emitting light LEDs emitting light
	LEDS CHIRCHING IIGHT

Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838)

'789 Patent Claims **Corresponding Product Features** The gallium nitride (GaN) layers of the LED are transparent for an emission wavelength. Spectrum 1 (top right panel) shows the elemental constituents of a layer of the LED (top left panel) as obtained from SEM-EDS analysis. As shown in Spectrum 1 (top right panel), the element Gallium (Ga) is present in the LED layer (top left panel), which is consistent with the LED comprising Gallium Nitride (GaN). Spectrum 2 (bottom right panel) shows the elemental constituents of a layer of the LED (bottom left panel) as obtained from SEM-EDS analysis. As shown in Spectrum 2 (bottom right panel), the elements Gallium (Ga) and Nitrogen (N) are present in the LED layer (bottom left panel), which is consistent with the LED comprising Gallium Nitride (GaN). Full Scale 1067 cts Cursor: 2.374 (22 cts) Spectrum 2 Full Scale 1120 cts Cursor: 6.153 (6 cts)

'789 Patent Claims	Corresponding Product Features The LED growth substrate is transparent sapphire (Al_2O_3). Spectrum 2 (right panel) shows the elemental constituents of the LED growth substrate (left panel) as obtained from SEM-EDS analysis. As shown in Spectrum 2 (right panel), the elements Aluminum (Al) and Oxygen (O) are present in the LED growth substrate (left panel), which is consistent with the LED growth substrate comprising sapphire (Al_2O_3).
	Spectrum 2 Spectrum 2
	The top thin film of the LED is InSnO or Indium Tin Oxide, frequently referred to as ITO, a transparent conductive
	oxide used in gallium nitride-based LEDs. Spectrum 1 (right panel) shows the elemental constituents of the top thin film of the LED (left panel) as obtained from SEM-EDS analysis. As shown in Spectrum 1 (right panel), the elements
	Indium (In) and Oxygen (O) are present in the top thin film of the LED (left panel), which is consistent with the top thin film comprising Indium Tin Oxide (InSnO).
	Spectrum 1 Section Heady 1

'789 Patent Claims	Corresponding Product Features
Claim 31	
31. The method of claim 29, wherein one or more layers of the LED are shaped, patterned, textured or roughened to increase the light extraction.	The Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) is made by a method wherein one or more layers of the LED are shaped, patterned, textured or roughened to increase the light extraction.

'789 Patent Claims	Corresponding Product Features
Claim 56	
56. A method of of [sic] fabricating an opto-electronic device, comprising:	The Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) is an opto-electronic device made by the claimed method.

Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838)

'789 Patent Claims **Corresponding Product Features** creating a light emitting The Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) is diode (LED) that emits light made by a method that includes creating a light emitting diode (LED) that emits light out of the LED from multiple out of the LED from sides of the LED. Below are images of a filament LED taken from this product and turned on to show LEDs emitting multiple sides of the LED, light out of multiple sides of the LEDs. Filament LED Side 1 Side 2

Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838)

'789 Patent Claims **Corresponding Product Features** The Great Value LED Deco Vintage Edison Light Bulb 4 Watt 2-pack, Model CAD4W22G-2P (Walmart # 555602838) is wherein the LED resides on made by a method wherein the LEDs reside on a transparent plate in a lead frame that allows the light to be a transparent plate in a lead frame that allows the light extracted from two or more sides of the LED. The below X-ray images show the LEDs residing on the transparent to be extracted from two or plate in the lead frame. The above image of the filament with LEDs turned on shows the light is extracted from two more sides of the LED. or more sides of the LEDs. Lead frame including a transparent plate Lead frame X-ray side view X-ray side view Lead frame including a Transparent plate transparent plate X-ray top view X-ray top view

