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# Seasonal affective disorder (SAD) light therapy

Joseph A. Woelfel

*University of the Pacific*, [jwoelfel@pacific.edu](mailto:jwoelfel@pacific.edu)

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## Seasonal Affective Disorder Light Therapy Product Comparison Chart

*(This chart represents some of the available light boxes in the U.S. and Canada)*

<b>Product Name</b>	<b>Brand/Information</b>	<b>Cost<sup>a</sup></b>	<b>10,000 Lux Intensity<sup>b</sup></b>	<b>UV Exposure<sup>c</sup></b>	<b>Weight, Other Features</b>
Bio-Light Executive	Enviro-Med* 800 222 3296 www.Bio-Light.com	\$399	19 inches	Broad Spectrum	6.5 lbs., variable intensity settings
Bio-Light Solar Deluxe	Enviro-Med* 800 222 3296 www.Bio-Light.com	\$420	24 inches	Broad Spectrum	9 lbs.
Bio-Light Ultra	Enviro-Med* 800 222 3296 www.Bio-Light.com	\$299	20 inches	Broad Spectrum	9 lbs.
BOX-elite	Northern Light Technologies* 800 263 0066 www.northernlighttechnologies.com	\$225	13 inches	Broad Spectrum	4.5 lbs.
Brite Lite IV	Apollo Health 800 545 9667 www.apollolight.com	\$329	28 inches	Full Spectrum with UV filter	7.5 lbs., for 1 to 2 users
Flamingo	Northern Light Technologies* 800 263 0066 www.northernlighttechnologies.com	\$255	12 inches	Broad Spectrum	15 lbs., floor lamp model
goLITE P1	Apollo Health 800 545 9667 www.apollolight.com	\$249	N/A (short wavelength blue light) Optimal distance= 20 inches	UV-Free	0.7 lbs., for travel, programmable clock, optional battery pack
NorthStar 10,000	Alaska Northern Lights 888 880 6953 www.alaskanorthernlights.com	\$249- \$259	24 inches	Broad Spectrum	10 lbs.
NU-YOU LIGHT	Nu-You Lighting 888 311 9994 www.nu-light.com	\$110	18 inches	Full Spectrum with UV filter	14 lbs.
SADelite	Northern Light Technologies* 800 263 0066 www.northernlighttechnologies.com	\$195	16-20 inches	Broad Spectrum	8 lbs., Desk lamp style, adjustable angles
Satellite Desk Lamp	Bio-Brite, Inc.* 301 961 5940 www.biobrite.com	\$230	20 inches	Full Spectrum with UV filter	10 lbs., Desk lamp style, adjustable angles

<b>Product Name</b>	<b>Brand/Information</b>	<b>Cost<sup>a</sup></b>	<b>10,000 Lux Intensity<sup>b</sup></b>	<b>UV Exposure<sup>c</sup></b>	<b>Weight, Other Features</b>
Sun Touch Plus	Apollo Health 800 545 9667 www.apollolight.com	\$249	18 inches	Full Spectrum with UV filter	8 lbs.
SunBox DL	The SunBox Company* 800 548 3968 www.sunbox.com	\$225	14 inches	Full Spectrum with ultraviolet diffuser	6 lbs., Desk lamp style
SunLight Jr.	The SunBox Company* 800 548 3968 www.sunbox.com	\$200	14 inches	Full Spectrum with ultraviolet diffuser	4 lbs., for travel
SunRay	The SunBox Company* 800 548 3968 www.sunbox.com	\$329	18.5 inches	Full Spectrum with ultraviolet diffuser	14 lbs., downward angle
SunRayII	The SunBox Company* 800 548 3968 www.sunbox.com	\$399	23 inches (high) 14 inches (low)	Full Spectrum with ultraviolet diffuser	16.5 lbs., downward angle, dual settings
SunSation	The SunBox Company* 800 548 3968 www.sunbox.com	\$237	14 inches	Full Spectrum with ultraviolet diffuser	3.5 lbs., downward angle, detachable desk stand included, light for travel
SunSquare+	The SunBox Company* 800 548 3968 www.sunbox.com	\$475	27 inches (high) 17 inches (low)	Full Spectrum with ultraviolet diffuser	34.5 lbs., downward angle, box plus stand, dual settings
The Litebook	The Litebook Company Ltd.* 877 723 5483 www.litebook.com Available through authorized resellers.	\$199	4 inches	Broad Spectrum	0.5 lbs., portable for travel, light emitting diode technology
TRAVelite	Northern Light Technologies* 800 263 0066 www.northernlighttechnologies.com	\$180	10-12 inches	Broad Spectrum	2.5 lbs., portable

<b>Product Name</b>	<b>Brand/Information</b>	<b>Cost<sup>a</sup></b>	<b>10,000 Lux Intensity<sup>b</sup></b>	<b>UV Exposure<sup>c</sup></b>	<b>Weight, Other Features</b>
Travel Lite	Bio-Brite, Inc.* 301 961 5940 www.biobrite.com	\$195	10 inches	Full Spectrum with UV filter	2 lbs., portable
UltraLux I	Full Spectrum Solutions 888 574 7014 www.fullspectrum solutions.com	\$229	12 inches	Full Spectrum (without ultraviolet spectrum)	6 lbs., includes dimmer
UltraLux II	Full Spectrum Solutions 888 574 7014 www.fullspectrum solutions.com	\$270	24 inches	Full Spectrum (without ultraviolet spectrum)	7 lbs.

- <sup>a.</sup> Cost information is approximate as of August 2006. It is based on the manufacturer-stated Internet website price in U.S. dollars. Actual selling prices may differ.
- <sup>b.</sup> The 10,000 lux intensity is rated at the shown distance as specified by the manufacturer at the time this chart was prepared.
- <sup>c.</sup> Full spectrum light includes the ultraviolet (UV) spectrum. Filters or diffusers are used to eliminate UV spectrum. Broad spectrum light excludes the UV spectrum.
- \* A Circadian Lighting Association member company. This association sets product standards for manufacturer members to assure safety, quality, and customers' confidence



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## Seasonal Affective Disorder (SAD) Light Therapy

*Lead author: Joseph A. Woelfel, Ph.D., FASCP, R.Ph., Assistant Editor*

Seasonal Affective Disorder (SAD) is a seasonal form of clinical depression typically seen in the fall and winter. It affects an estimated six percent of the U.S. population and two to three percent of the Canadian population. It is more common in women than men. It is not a self-diagnosable ailment. SAD can cause problems in functioning both at work and in one's personal life.<sup>1,2</sup> The American Psychiatric Association guidelines on major depressive disorders recommend the entire range of depressive treatments for SAD, in combination with or as an alternative to light therapy. Light therapy is considered adjunctive to psychopharmacologic therapies for severe forms of SAD.<sup>3</sup>

SAD is thought to be caused by the light-dark cycle or photoperiodic mechanisms that mediate seasonal rhythms. Other theories involve neurotransmitter or neurohormonal systems, including melatonin, serotonin, tryptophan, and dopamine.<sup>4</sup> The antidepressant effects of increased serotonin are well recognized as is the relationship of darkness to increased melatonin production that leads to sleepiness.

Effective light therapy is achieved by exposure to 10,000 lux cool-white light. Distance of exposure from the light to the person is specific for 10,000 lux intensity rating. Lower intensity-rated products are available but require closer distances and extended exposure. Boxes are equipped with either full spectrum or broad spectrum lights. Full spectrum lights include the ultraviolet spectrum and must be used with an ultraviolet filter or diffuser for safety. Broad spectrum lights exclude the ultraviolet spectrum. Optimal exposure is for 30 to 45 minutes early in the morning upon awakening. Eyes must be open not closed for therapy to be effective.<sup>4</sup>

The Circadian Lighting Association is an international trade association of light therapy manufacturers. It sets certain product standards for manufacturer members to assure customers'

confidence. Through independent testing of products checks on ultraviolet light filtration, lux output at designated distances, and other quality tests are required for membership designation.<sup>5</sup>

Insurance coverage for light therapy is difficult and varies with the particular insurer. Since the FDA has not evaluated light therapy, many insurance companies consider it experimental. SAD is recognized as an accepted psychiatric diagnosis and as such the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) of the American Psychiatric Association is used to classify and code it.

The clinical depression diagnoses codes include:

DSM IV Code Number	Diagnosis
296.3x	Major depression, recurrent
296.4x	Bipolar disorder, most recent episode-manic
296.5x	Bipolar disorder, depressed
296.6x	Bipolar disorder, Mixed
296.8	Bipolar disorder, NOS
311.00	Depressive disorder, NOS

The fifth digit represented by "x" in the above table is a modifier for the severity of the disorder.<sup>6</sup>

Reimbursement for light boxes can be tried with a physician letter indicating medical necessity. A sample letter can be found at the Sunbox Company website at: <https://www.sunbox.com/Products/BuyersGuide.asp>

*Users of this document are cautioned to use their own professional judgment and consult any other necessary or appropriate sources prior to making clinical judgments based on the content of this document. Our editors have researched the information with input from experts, government agencies, and national*

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