

Exhibit A

NKT Photonics Inc.'s Non-Infringement Claim Chart for U.S. Patent No. 7,433,116

<i>Claim Term</i>	<i>Non-infringement Position</i>
1. An infrared light source, comprising:	The Accused Lasers are not infrared light sources within the meaning of this claim. The Accused Lasers produce a broad spectrum of visible and infrared light, as opposed to the light source of this claim, which is limited to single-wavelength infrared sources.
one or more combiners coupled to at least a first pump laser operable to generate a first pump signal and a second pump laser operable to generate a second pump signal, the one or more combiners operable to combine the first pump signal and the second pump signal into a first optical signal, the first pump signal comprising at least a first wavelength and the second pump signal comprising at least a second wavelength, wherein the first wavelength of the first pump signal is substantially different than the second wavelength of the second pump signal; and	Claim 1 requires that a combiner combine a first pump signal and a second pump signal into a “first optical signal.” The “first optical signal” of Claim 1, therefore, must be comprised of light that includes both the first and second wavelengths. Moreover, the “pump signals” of the claim do not create a population inversion by pumping a gain medium but instead induce a Raman effect in a waveguide. The Accused Lasers do not function in the way that Omni asserts that they do. The alleged “first pump laser” identified by Omni is not a separate laser distinct from the alleged “second pump laser” that is combined into a single fiber with a beam “combiner.” The “master oscillator stage” (i.e., the seed laser) in the Accused Lasers is a single optical cavity whose gain medium is pumped by a single laser diode (the alleged “second pump laser”). The “master oscillator stage” is, therefore, a single laser with a single output. Moreover, there is no beam “combiner” and light from the alleged “first pump laser” is not combined with light from the alleged “second pump laser.” The alleged “second pump laser” is an integral part of the “master oscillator.” The term “wherein the first wavelength of the first pump signal is substantially different than the second wavelength of the second pump signal” is indefinite, so it is not possible to determine how different the first and second wavelengths need to be to be “substantially different” within the meaning of this claim limitation.

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a wavelength shifter coupled to the one or more combiners, the wavelength shifter comprising a first waveguide structure and a second waveguide structure,	The wavelength shifter identified by Omni is a single fiber, and not two separate fibers. As a result, it is not comprised of a first waveguide structure and a second waveguide structure.
the wavelength shifter operable to receive the first optical signal and to wavelength shift at least a portion of the first optical signal based at least in part on a Raman effect,	The wavelength shifter identified by Omni does not receive a “first optical signal.” There is an optical isolator after the “master oscillator” that blocks any of the light from any alleged “second pump laser.” Therefore, the alleged “wavelength shifter” identified by Omni does not “receive the first optical signal” because it, at most, receives only the first wavelength light (1064 nm). The wavelength shifter identified by Omni does not “shift” the wavelength of any optical signal. As used in the ’116 Patent, “shift” has the specific meaning of moving the wavelength of light in the first optical signal from one specific wavelength to another. The processes used in the Accused Lasers broaden the light from the seed laser, which is different from merely shifting it. Moreover, any Raman effects that occur in fibers in the Accused Lasers are not on the “first optical signal” but are on solitons formed in the fibers from the amplified seed pulses. Thus, even if shifting of the “first optical signal” were to occur, the shifting is not due to the “Raman effect” and any shifts would not be of the “first optical signal.” The term “wavelength shift at least a portion of the first optical signal based at least in part on a Raman effect” is indefinite, so it is not possible to determine what kinds of “Raman effects” are within the meaning of this claim limitation.

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wherein the wavelength shifter operates to wavelength shift at least the first wavelength to an intermediate optical wavelength in the first waveguide structure and to wavelength shift the intermediate optical wavelength to a longer optical wavelength in the second waveguide structure;	The wavelength shifter identified by Omni does not “shift” the wavelength of any optical signal. As used in the ’116 Patent, “shift” has the specific meaning of moving the wavelength of light in the first optical signal from one specific wavelength to another. The processes used in the Accused Lasers broaden the light from the seed laser, which is different from shifting it. Moreover, the fiber identified by Omni as the first waveguide structure has normal dispersion at 1064 nm, so it cannot shift the 1064 nm light to longer wavelengths.
wherein at least a portion of the intermediate optical wavelength is greater than the first wavelength and wherein at least a portion of the longer optical wavelength is greater than the intermediate optical wavelength; and	
wherein the first waveguide structure is substantially different than the second waveguide structure.	This limitation is indefinite, so it is not possible to determine how different the first and second waveguide structures need to be to be “substantially different” within the meaning of this claim limitation.
2. The infrared light source of claim 1, wherein the first pump laser is selected from the group consisting of a continuous wave laser and a pulsed laser.	Because the Accused Lasers do not infringe Claim 1 of the ’116 Patent, they cannot infringe this dependent claim.

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3. The infrared light source of claim 1, wherein the first pump laser is selected from the group consisting of a solid state laser, a Nd:YAG laser, a Nd:YLF laser, laser diodes, a semiconductor laser, and a cladding pump fiber.	Because the Accused Lasers do not infringe Claim 1 of the '116 Patent, they cannot infringe this dependent claim. In addition, the alleged first pump laser is not one of the types enumerated in this claim.
4. The infrared light source of claim 1, wherein the second pump laser is selected from the group consisting of a solid state laser, a Nd:YAG laser, a Nd:YLF laser, laser diodes, a semiconductor laser, and a cladding pump fiber.	Because the Accused Lasers do not infringe Claim 1 of the '116 Patent, they cannot infringe this dependent claim.
9. The infrared light source of claim 1, wherein the longer optical wavelength comprises a pulsed optical signal having a pulse repetition rate in the range of two (2) hertz to one hundred (100) megahertz.	Because the Accused Lasers do not infringe Claim 1 of the '116 Patent, they cannot infringe this dependent claim.
12. The infrared light source of claim 1, wherein the one or more combiners are selected from the group consisting of a wavelength division multiplexer and a power coupler.	Because the Accused Lasers do not infringe Claim 1 of the '116 Patent, they cannot infringe this dependent claim. Moreover, there is no "combiner" in the "master oscillator stage."

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13. The infrared light source of claim 1, wherein the first waveguide structure is selected from the group consisting of a dispersion compensating fiber, a dispersion shifted fiber, a single mode fiber, a chalcogenide fiber, and a fused silica optical fiber.	Because the Accused Lasers do not infringe Claim 1 of the '116 Patent, they cannot infringe this dependent claim.
14. The infrared light source of claim 1, wherein at least a portion of the first waveguide structure is selected from the group consisting of an optical fiber, a hollow tube waveguide, an air core waveguide, and a planar waveguide.	Because the Accused Lasers do not infringe Claim 1 of the '116 Patent, they cannot infringe this dependent claim.
16. The infrared light source of claim 1, wherein at least a portion of the second waveguide structure is selected from the group consisting of an optical fiber, a hollow tube waveguide, an air core waveguide, and a planar waveguide.	Because the Accused Lasers do not infringe Claim 1 of the '116 Patent, they cannot infringe this dependent claim.
19. The infrared light source of claim 1, wherein the longer optical wavelength comprises a wavelength of approximately 1.7 microns or more.	Because the Accused Lasers do not infringe Claim 1 of the '116 Patent, they cannot infringe this dependent claim.

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20. The infrared light source of claim 1, wherein the longer optical wavelength comprises a wavelength in the range of two (2) microns to ten (10) microns.	Because the Accused Lasers do not infringe Claim 1 of the '116 Patent, they cannot infringe this dependent claim.
22. The infrared light source of claim 1, further comprising a wavelength separator coupled to the wavelength shifter and capable of transmitting at least a portion of a selected wavelength from the wavelength shifter.	Because the Accused Lasers do not infringe Claim 1 of the '116 Patent, they cannot infringe this dependent claim. Not all of the Accused Lasers are sold with the alleged wavelength separators identified by Omni. Those products that are not sold with wavelength separators cannot infringe this dependent claim.
23. The infrared light source of claim 22, wherein the wavelength separator is selected from the group consisting of a demultiplexer, one or more partially transmissive gratings, one or more partially transmitting mirrors, one or more Fabry Perot filters and one or more dielectric gratings.	Because the Accused Lasers do not infringe Claim 1 of the '116 Patent, they cannot infringe this dependent claim. Not all of the Accused Lasers are sold with the alleged wavelength separators identified by Omni. Those products that are not sold with wavelength separators cannot infringe this dependent claim.
24. The infrared light source of claim 1, further comprising at least a third waveguide structure coupled to the wavelength shifter, wherein a coupling loss between the third waveguide structure and the wavelength shifter comprises no more than five (5) decibels.	Because the Accused Lasers do not infringe Claim 1 of the '116 Patent, they cannot infringe this dependent claim.