## NARVA BIO vital®

# ... like natural sunlight





# Natural sunlight enhances efficiency and good health ...

The positive effect of natural sunlight on the physical and mental functions of a human body has been established several centuries ago. Compared to our forefathers we spend much time today in areas with artificial illumination.

The sunlight – deficiency syndrome that is a consequence thereof is hereby manifested through headache, lack of concentration, fatigue or weariness, reduction of sight, enfeeblement of the immune system right up to disorder of the vegetative nervous system and depressions.

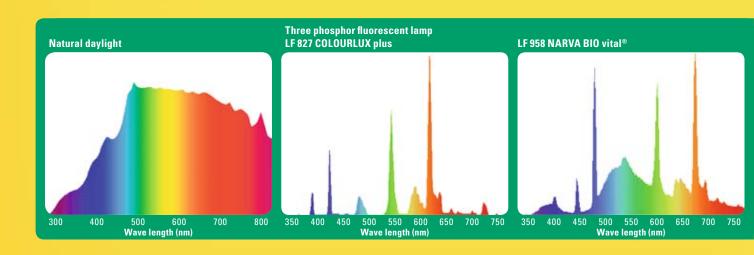
Natural daylight – generated by the sun – is, beside visible light, also composed of an ultraviolet and an infrared percentage. Especially the ultraviolet percentage is of great importance to our well-being. It acts reflationary and compensatory to metabolism, blood pressure and to adenoids or gland functions. The vitamin D-synthesis that is indispensable for a healthy bone structure is stimulated by ultraviolet rays.

#### What is NARVA BIO vital®?

NARVA BIO vital® is artificial light, which, practically in its spectral composition is equivalent to natural sunlight. Contrary to standard lamps the light of NARVA BIO vital® illuminates or shines not only in visible areas of the spectrum but also incorporates the ultraviolet percentage in a similar manner like sunlight.

#### With NARVA BIO vital® one has:

- the vitalising effect of ultraviolet percentage/portion
- a counterbalanced spectrum, almost completely equivalent to that of sunlight
- a very good colour reproduction (Ra > 90) and an excellent contrast vision
- up to 80 % energy conservation as compared to filament bulbs



Humans are not adaptive in any phase of life like they are during childhood and adolescence. Natural sunlight with an ultraviolet percentage plays a vital role in the development of children and adolescents. That is why the ultraviolet percentage in the spectrum of the lamps of the NARVA BIO vital® series is so important.

#### **Kindergartens and schools**

Ultraviolet percentage in light has a significant influence on the bone structure (Vitamin-D-formation) and helps to strengthen the immune system. Furthermore, the lamps of the NARVA BIO vital® series facilitate a better vision of colours.



A quantitatively high quality illumination is one of the decisive factors for a concentrated and fatigue-free learning. Light of the lamps of the NARVA BIO vital® series similar to that of sunlight guarantees a high ability to concentrate and also over a long period of time.







Nowadays people spend a greater part of the time, in professional life, mostly in rooms/areas without sufficient natural daylight. Most of the standard fluorescent lamps employed here do not offer a full-fledged substitution or compensation for natural sunlight. This leads to an enormous light deficiency that must be unconditionally compensated for the well-being and the efficiency of human beings.



#### **Factory workshops**

By using of lamps of the series NARVA BIO vital® the performance increases and the error rate is reduced. Many companies like company MIELE are using these lamps for production facility lighting.

#### **Offices**

Reading, writing and working on the computer are the most important activities in an office. The outstandingly good colour reproduction enables a good identification and a fatigue-free working/functioning as well as a high power of concentration.

What does good to human beings also naturally has a positive influence on the plants and animals in our environment. An optimal growth requires a light that is equivalent to natural sunlight in its spectral composition.

#### **Animal husbandry**

In intensive livestock husbandry, be it in diary cattle facilities, in pig fattening or in intensive poultry management, the animals spend most of their entire life in artificial illumination. Lamps of the NARVA BIO vital® series can counterbalance or compensate, to a very large extent, the occurring deficiency of natural sunlight thereof, and thereby provide for better results in livestock husbandry.

#### Plant breeding

The appropriate light is one of the main factors for an optimal plant growth. Particularly in plant breeding the blue sections of the spectrum (blue, violet and ultraviolet) are of great importance. The light of the lamps of the NARVA BIO vital® series with its colour temperature of 5.800 K optimally fulfil these requirements.







## NARVA BIO vital® ... like natural sunlight

- excellent colour rendering and light similar to natural daylight with 5.800 K
- with UV-A and UV-B part in the spectrum for better well-being



LT-T5 NARVA BIO vital®

LT-T8 NARVA BIO vital®



HELIX NARVA BIO vital®

NT NARVA BIO vital®

Type									
Type									
LT-T8 NARVA BIO vita ®   LT-T8 NARVA BIO vita ®   S					0:				
LT-T8 NARVA BIO vital®  LT 15 W/958	Type		Light colour				Сар	Order number	
LT 15 W/958		wattage w		iiux im	Ømm	Length mm			4 014501
LT 18 W/958		45	OFO NARWARIO : 18	750	0.0	400	0.40	4404511.0040	040400
LT 30 W/958									
LT 36 W/958	·								
LT 58 W/958 58 958 NARVA BIO vital® 4.500 26 1.500 G 13 11058H 0015 040164  LT-T5 NARVA BIO vital® LT 14 W T5-EQ/958 14 958 NARVA BIO vital® 925 16 549 G 5 17114T5H 0003 032114 LT 21 W T5-EQ/958 21 958 NARVA BIO vital® 1.450 16 849 G 5 17122T5H 0003 032121 LT 28 W T5-EQ/958 28 958 NARVA BIO vital® 2.000 16 1.149 G 5 17128T5H 0004 032138 LT 35 W T5-EQ/958 35 958 NARVA BIO vital® 2.500 16 1.449 G 5 17128T5H 0004 032145 LT 24 W T5-HQ/958 24 958 NARVA BIO vital® 1.400 16 549 G 5 17124T5HQH 0004 032152 LT 39 W T5-HQ/958 39 958 NARVA BIO vital® 2.450 16 849 G 5 17139T5HQH 0005 032169 LT 49 W T5-HQ/958 49 958 NARVA BIO vital® 3.400 16 1.449 G 5 17149T5HQH 0004 032176 LT 54 W T5-HQ/958 54 958 NARVA BIO vital® 3.500 16 1.449 G 5 17149T5HQH 0004 032176 LT 54 W T5-HQ/958 54 958 NARVA BIO vital® 3.500 16 1.449 G 5 17154T5HQH 0006 032183 LT 80 W T5-HQ/958 80 958 NARVA BIO vital® 4.900 16 1.449 G 5 17154T5HQH 0006 032183 LT 80 W T5-HQ/958 80 958 NARVA BIO vital® 4.900 16 1.449 G 5 17180T5HQH 0005 032190  KLD-L NARVA BIO vital® KLD-L 18 W/958 18 958 NARVA BIO vital® 4.900 16 1.449 G 5 17180T5HQH 0005 032190  KLD-L NARVA BIO vital® KLD-L 24 W/958 36 958 NARVA BIO vital® 2.300 44 317 2 G 11 166018 0004 032602  KLD-L 36 W/958 36 958 NARVA BIO vital® 2.300 44 411 2 G 11 166036 0004 032626  KLD-L 40 W/958 40 958 NARVA BIO vital® 2.300 44 533 2 G 11 166040 0002 032613  KLD-L 55 W/958 55 958 NARVA BIO vital® 3.600 44 533 2 G 11 166040 0002 032633  KLD-L 55 W/958 55 958 NARVA BIO vital® 3.600 44 533 2 G 11 166040 0002 032633  KLD-L 55 W/958 55 958 NARVA BIO vital® 3.600 44 553 2 G 11 166080 0003 032657				1111					
LT-T5 NARVA BIO vital® LT 14 W T5-E0/958									
LT 14 W T5-EQ/958		58	958 NAKVA BIU vital®	4.500	26	1.500	G 13	11058H 0015	040164
LT 21 W T5-Ed/958									
LT 28 W T5-EQ/958	· ·								
LT 35 W T5-EQ/958 35 958 NARVA BIO vital® 2.500 16 1.449 G 5 17135T5H 0004 032145 LT 24 W T5-HQ/958 24 958 NARVA BIO vital® 1.400 16 549 G 5 17124T5HQH 0004 032152 LT 39 W T5-HQ/958 39 958 NARVA BIO vital® 2.450 16 849 G 5 17139T5HQH 0005 032169 LT 49 W T5-HQ/958 49 958 NARVA BIO vital® 3.400 16 1.449 G 5 17149T5HQH 0004 032176 LT 54 W T5-HQ/958 54 958 NARVA BIO vital® 3.500 16 1.149 G 5 17154T5HQH 0006 032183 LT 80 W T5-HQ/958 80 958 NARVA BIO vital® 4.900 16 1.449 G 5 17180T5HQH 0005 032190 KLD-L NARVA BIO vital® 4.900 16 1.449 G 5 17180T5HQH 0005 032190 KLD-L 18 W/958 18 958 NARVA BIO vital® 925 44 217 2 G 11 166018 0004 032602 KLD-L 24 W/958 24 958 NARVA BIO vital® 1.450 44 317 2 G 11 166024 0002 032619 KLD-L 36 W/958 36 958 NARVA BIO vital® 2.300 44 411 2 G 11 166036 0004 032626 KLD-L 40 W/958 40 958 NARVA BIO vital® 2.700 44 533 2 G 11 166040 0002 032633 KLD-L 55 W/958 55 958 NARVA BIO vital® 3.600 44 533 2 G 11 166055 0004 032640 KLD-L 80 W/958 80 958 NARVA BIO vital® 3.600 44 555 2 G 11 166080 0003 032657 HELIX NARVA BIO vital® 4.550 44 565 2 G 11 166080 0003 032657	·					1 1			
LT 24 W T5-HQ/958						-			
LT 39 W T5-HQ/958 39 958 NARVA BIO vital® 2.450 16 849 G 5 17139T5HQH 0005 032169 LT 49 W T5-HQ/958 49 958 NARVA BIO vital® 3.400 16 1.449 G 5 17149T5HQH 0004 032176 LT 54 W T5-HQ/958 54 958 NARVA BIO vital® 3.500 16 1.149 G 5 17154T5HQH 0006 032183 LT 80 W T5-HQ/958 80 958 NARVA BIO vital® 4.900 16 1.449 G 5 17180T5HQH 0005 032190  KLD-L NARVA BIO vital® KLD-L 18 W/958 18 958 NARVA BIO vital® 925 44 217 2 G 11 166018 0004 032602 KLD-L 24 W/958 24 958 NARVA BIO vital® 1.450 44 317 2 G 11 166024 0002 032619 KLD-L 36 W/958 36 958 NARVA BIO vital® 2.300 44 411 2 G 11 166036 0004 032626 KLD-L 40 W/958 40 958 NARVA BIO vital® 2.700 44 533 2 G 11 166040 0002 032633 KLD-L 55 W/958 55 958 NARVA BIO vital® 3.600 44 533 2 G 11 166055 0004 032640 KLD-L 80 W/958 80 958 NARVA BIO vital® 4.550 44 565 2 G 11 166080 0003 032657  HELIX NARVA BIO vital®						-			
LT 49 W T5-HQ/958	·					1 1			
LT 54 W T5-HQ/958 54 958 NARVA BIO vital® 3.500 16 1.149 G 5 17154T5HQH 0006 032183 LT 80 W T5-HQ/958 80 958 NARVA BIO vital® 4.900 16 1.449 G 5 17180T5HQH 0005 032190  KLD-L NARVA BIO vital® KLD-L 18 W/958 18 958 NARVA BIO vital® 925 44 217 2 G 11 166018 0004 032602 KLD-L 24 W/958 24 958 NARVA BIO vital® 1.450 44 317 2 G 11 166024 0002 032619 KLD-L 36 W/958 36 958 NARVA BIO vital® 2.300 44 411 2 G 11 166036 0004 032626 KLD-L 40 W/958 40 958 NARVA BIO vital® 2.700 44 533 2 G 11 166040 0002 032633 KLD-L 55 W/958 55 958 NARVA BIO vital® 3.600 44 533 2 G 11 166055 0004 032640 KLD-L 80 W/958 80 958 NARVA BIO vital® 4.550 44 565 2 G 11 166080 0003 032657  HELIX NARVA BIO vital®	· ·					1 1			
LT 80 W T5-HQ/958       80       958 NARVA BIO vital®       4.900       16       1.449       6 5       17180T5HQH 0005       032190         KLD-L NARVA BIO vital®       925 44       217       2 G 11       166018 0004       032602         KLD-L 18 W/958       18       958 NARVA BIO vital®       1.450       44       317       2 G 11       166024 0002       032619         KLD-L 36 W/958       36       958 NARVA BIO vital®       2.300       44       411       2 G 11       166036 0004       032626         KLD-L 40 W/958       40       958 NARVA BIO vital®       2.700       44       533       2 G 11       166040 0002       032633         KLD-L 55 W/958       55       958 NARVA BIO vital®       3.600       44       533       2 G 11       166055 0004       032640         KLD-L 80 W/958       80       958 NARVA BIO vital®       4.550       44       565       2 G 11       166080 0003       032657         HELIX NARVA BIO vital®	·								
KLD-L NARVA BIO vital®         KLD-L 18 W/958       18       958 NARVA BIO vital®       925       44       217       2 G 11       166018 0004       032602         KLD-L 24 W/958       24       958 NARVA BIO vital®       1.450       44       317       2 G 11       166024 0002       032619         KLD-L 36 W/958       36       958 NARVA BIO vital®       2.300       44       411       2 G 11       166036 0004       032626         KLD-L 40 W/958       40       958 NARVA BIO vital®       2.700       44       533       2 G 11       166040 0002       032633         KLD-L 55 W/958       55       958 NARVA BIO vital®       3.600       44       533       2 G 11       166055 0004       032640         KLD-L 80 W/958       80       958 NARVA BIO vital®       4.550       44       565       2 G 11       166080 0003       032657         HELIX NARVA BIO vital®	·								
KLD-L 18 W/958       18       958 NARVA BIO vital®       925       44       217       2 G 11       166018 0004       032602         KLD-L 24 W/958       24       958 NARVA BIO vital®       1.450       44       317       2 G 11       166024 0002       032619         KLD-L 36 W/958       36       958 NARVA BIO vital®       2.300       44       411       2 G 11       166036 0004       032626         KLD-L 40 W/958       40       958 NARVA BIO vital®       2.700       44       533       2 G 11       166040 0002       032633         KLD-L 55 W/958       55       958 NARVA BIO vital®       3.600       44       533       2 G 11       166055 0004       032640         KLD-L 80 W/958       80       958 NARVA BIO vital®       4.550       44       565       2 G 11       166080 0003       032657         HELIX NARVA BIO vital®	· ·	80	958 NARVA BIO vital®	4.900	16	1.449	G 5	17180T5HQH 0005	032190
KLD-L 24 W/958       24       958 NARVA BIO vital®       1.450       44       317       2 G 11       166024 0002       032619         KLD-L 36 W/958       36       958 NARVA BIO vital®       2.300       44       411       2 G 11       166024 0002       032619         KLD-L 40 W/958       40       958 NARVA BIO vital®       2.700       44       533       2 G 11       166040 0002       032633         KLD-L 55 W/958       55       958 NARVA BIO vital®       3.600       44       533       2 G 11       166055 0004       032640         KLD-L 80 W/958       80       958 NARVA BIO vital®       4.550       44       565       2 G 11       166080 0003       032657         HELIX NARVA BIO vital®									
KLD-L 36 W/958       36       958 NARVA BIO vital®       2.300       44       411       2 G 11       166036 0004       032626         KLD-L 40 W/958       40       958 NARVA BIO vital®       2.700       44       533       2 G 11       166040 0002       032633         KLD-L 55 W/958       55       958 NARVA BIO vital®       3.600       44       533       2 G 11       166055 0004       032640         KLD-L 80 W/958       80       958 NARVA BIO vital®       4.550       44       565       2 G 11       166080 0003       032657         HELIX NARVA BIO vital®	KLD-L 18 W/958								
KLD-L 40 W/958       40       958 NARVA BIO vital®       2.700       44       533       2 G 11       166040 0002       032633         KLD-L 55 W/958       55       958 NARVA BIO vital®       3.600       44       533       2 G 11       166055 0004       032640         KLD-L 80 W/958       80       958 NARVA BIO vital®       4.550       44       565       2 G 11       166080 0003       032657         HELIX NARVA BIO vital®	KLD-L 24 W/958	24	958 NARVA BIO vital®	1.450	44	317		166024 0002	032619
KLD-L 55 W/958       55       958 NARVA BIO vital®       3.600       44       533       2 G 11       166055 0004       032640         KLD-L 80 W/958       80       958 NARVA BIO vital®       4.550       44       565       2 G 11       166080 0003       032657         HELIX NARVA BIO vital®	KLD-L 36 W/958	36	958 NARVA BIO vital®	2.300	44	411		166036 0004	032626
KLD-L 80 W/958 80 958 NARVA BIO vital® 4.550 44 565 2 G 11 166080 0003 032657  HELIX NARVA BIO vital®	KLD-L 40 W/958	40	958 NARVA BIO vital®	2.700	44	533	2 G 11	166040 0002	032633
HELIX NARVA BIO vital®	KLD-L 55 W/958	55	958 NARVA BIO vital®	3.600	44	533	2 G 11	166055 0004	032640
	KLD-L 80 W/958	80	958 NARVA BIO vital®	4.550	44	565	2 G 11	166080 0003	032657
HELIV 10 W/050 10 050 NADVA DIO vitol® 470 00 00 CV 24 ~ 1 10010N 0000 041451	HELIX NARVA BIO vital®								
	HELIX 10 W/958	10	958 NARVA BIO vital®	470	60	90	GX 24 q-1	16010N 0002	041451
HELIX 13 W/958 13 958 NARVA BIO vital® 650 60 107 GX 24 q-1 16013N 0004 041338	HELIX 13 W/958	13	958 NARVA BIO vital®	650	60	107	GX 24 q-1	16013N 0004	041338
HELIX 18 W/958 18 958 NARVA BIO vital® 1.000 60 122 GX 24 q-2 16018N 0003 041345	HELIX 18 W/958	18	958 NARVA BIO vital®	1.000	60	122	GX 24 q-2	16018N 0003	041345
NT NARVA BIO vital®	NT NARVA BIO vital®								
NT 9 W/958 9 958 NARVA BIO vital® 400 60 118 E 27 16009N 0010 041079	NT 9 W/958	9	958 NARVA BIO vital®	400	60	118	E 27	16009N 0010	041079
NT 11 W/958 11 958 NARVA BIO vital® 470 60 123 E 27 16011N 0046 041109	NT 11 W/958	11	958 NARVA BIO vital®	470	60	123	E 27	16011N 0046	041109
NT 15 W/958 15 958 NARVA BIO vital® 650 60 132 E 27 16015N 0063 041116	NT 15 W/958	15		650	60	132	E 27	16015N 0063	041116
NT 20 W/958 20 958 NARVA BIO vital® 930 60 140 E 27 16020KN 0010 041147	NT 20 W/958	20	958 NARVA BIO vital®	930	60	140	E 27	16020KN 0010	041147
NT 23 W/958 23 958 NARVA BIO vital® 1.050 60 152 E 27 16023N 0057 041178	NT 23 W/958	23	958 NARVA BIO vital®	1.050	60	152	E 27	16023N 0057	041178

Subject to change without prior information

### NARVA

NARVA Lichtquellen GmbH + Co. KG

D-09618 Brand-Erbisdorf • Industriegebiet Nord, Erzstraße 22 Tel.: +49 (0) 37322/17200, 17202 • Fax: +49 (0) 37322/17203, 17223 E-Mail: office@narva-bel.de • Homepage: www.narva-bel.de

#### Your dealer

Bailey Electric & Electronics bv Everdenberg 21 4902TT Oosterhout

The Netherlands

+31 (0)162 522446

+31 (0)162 522501

info@bailey.nl

www.bailey.nl