



V_{COM} and Gamma Buffers Programmable V_{COM} Amplifiers

Device	# of DCP Channels	# of V _{COM}	V _S (V)	BW (MHz)	SR (V/μs)	EEPROM	Rail-to-Rail	Interface	Package
EL9200	1	1	4.5 to 16.5	44	10	Y	Y	Up/Down	12 Ld DFN
EL9201	1	2	4.5 to 16.5	44	10	Y	Y	Up/Down	24 Ld QFN
EL9202	1	4	4.5 to 16.5	44	10	Y	Y	Up/Down	24 Ld QFN
ISL45041	1	N/A	4.5 to 18	N/A	N/A	Y	N/A	I ² C	8 Ld TDFN
ISL45042	1	N/A	4.5 to 18	N/A	N/A	Y	N/A	Up/Down	8 Ld TDFN
ISL45042A	1	N/A	4.5 to 18	N/A	N/A	Y	N/A	Up/Down	8 Ld TDFN

V_{COM} Amplifiers and Panel Repair

Device	# of Devices/Channels	V _S (V)	BW (MHz)	SR (V/μs)	Rail-to-Rail	I _S (mA)	I _{OUT} (mA)	Package
EL5120	1	4.5 to 18	12	10	In/Out	0.5	30	5 Ld TSOT, 8 Ld HMSOP
EL5220	2	4.5 to 18	12	10	In/Out	0.5	30	8 Ld MSOP
EL5420	4	4.5 to 18	12	10	In/Out	0.5	30	14 Ld SOIC, 14 Ld TSSOP, 16 Ld QFN
EL5210	2	4.5 to 18	30	33	In/Out	2.5	120	8 Ld MSOP, 8 Ld SOIC
EL5410	4	4.5 to 18	30	33	In/Out	2.5	120	14 Ld SOIC, 14 Ld TSSOP
EL5111	1	4.5 to 18	60	75	In/Out	2.5	180	5 Ld TSOT, 8 Ld HMSOP
EL5211	2	4.5 to 18	60	75	In/Out	2.5	180	8 Ld HMSOP
EL5211A	2	4.5 to 18	60	75	In/Out	2.5	180	8 Ld HMSOP
EL5411	4	4.5 to 18	60	75	In/Out	2.5	180	14 Ld HTSSOP, 14 Ld TSSOP
EL5611	6	4.5 to 18	60	75	In/Out	2.5	180	24 Ld HTSSOP
EL5811	8	4.5 to 18	60	75	In/Out	2.5	180	28 Ld HTSSOP
EL9211	1	4.5 to 14	130	115	In	2.4	300	5 Ld SOT-23, 8 Ld HMSOP
EL9212	2	4.5 to 14	130	115	In	2.4	300	8 Ld HMSOP
EL9214	4	4.5 to 14	130	115	In	2.4	300	14 Ld HTSSOP

Programmable Gamma Reference Generators

Device	BW (MHz)	V _S (min) (V)	V _S (max) (V)	I _S (per amp) (mA)	# of Devices/Channels	I _{OUT} (mA)	V _{OUT} (V)	Rail-to-Rail Input	Rail-to-Rail Output	PSRR (dB)	Thermal Shutdown	Gain A _V (min)	Enable	Package
EL5225		5	16.5	9	10	140	14.9	N	Y	65	N		N	24 Ld TSSOP
EL5325		5	16.5	10	12	140	14.9	N	Y	65	Y		N	28 Ld TSSOP
EL5325A		5	16.5	10	12	140	14.9	N	Y	65	Y		N	28 Ld TSSOP
EL5126	0.4	4.5	16.5	10	8	240	14.9	N	Y	60	N		N	32 Ld QFN
EL5226	0.4	5	16.5	9	10	240	14.9	N	Y	65	N		N	28 Ld TSSOP
EL5326	0.4	5	16.5	10	12	240	14.9	N	Y	65	N	1	N	28 Ld TSSOP

Programmable Gamma Reference Generators (Continued)

Device	# of Devices/ Channels	V _S (V)	Bus Interface Type	Bus Interface Speed (MHz)	Rail-to-Rail	I _S (mA)	Package
ISL24005	14	5 to 18	I ² C	0.4	Out	20	32 Ld TOFN
ISL24006	18	5 to 18	I ² C	0.4	Out	30	38 Ld QFN
ISL24007	14	5 to 18	I ² C	0.4	Out	20	38 Ld QFN
ISL24008	14	5 to 18	SPI	0.4	Out	10	32 Ld TOFN
ISL24813	18	5 to 19	I ² C	0.4	Out	20	32 Ld TOFN
ISL24821	12	5 to 19	I ² C	0.4	Out	20	32 Ld TOFN
ISL24822	14	5 to 19	I ² C	0.4	Out	20	32 Ld TOFN

Gamma Buffers

Device	BW (MHz)	SR (V/μs)	V _S (min) (V)	V _S (max) (V)	I _S (per amp) (mA)	Noise V _N (nV/√Hz)	I _{BIAS} (μA)	V _{OS} (max) (mV)	# of Devices/ Channels	I _{OUT} (mA)	V _{OUT} (V)	Rail-to-Rail Input	Rail-to-Rail Output	PSRR (dB)	Gain A _V (min)	Enable	Package
EL5027	2.5	1.2	4.5	16.5	0.11	11	0.05	15	2	120	9.84	Y	Y	80	1	N	6 Ld TSOT
EL5127	2.5	2.2	4.5	16.5	13.3	12	0.002	1	4	120	14.9	Y	Y	80	1	N	10 Ld MSOP
EL5227	2.5	2.2	4.5	16.5	0.33	12	0.002	1	8	120	14.9	Y	Y	80	1	N	20 Ld TSSOP, 24 Ld QFN
EL5327	2.5	2.2	4.5	16.5	0.133	12	0.002	1	10	120	14.9	Y	Y	80	1	N	24 Ld QFN, 24 Ld TSSOP
EL5427	2.5	2.2	4.5	16.5	0.133	12	0.002	1	12	120	14.9	Y	Y	80	1	N	28 Ld TSSOP, 32 Ld QFN

Integrated Gamma Buffers with V_{COM} Amplifier

Device	# of Buffers	# of V _{COM}	V _S (V)	V _{COM} BW (MHz)	BW (MHz)	V _{COM} I _{sc} (mA)	I _S (mA)	Package
EL5129	6	1	4.5 to 18	15	10	170	3.5	20 Ld HTSSOP
EL5329	10	1	4.5 to 18	15	10	170	5.5	28 Ld HTSSOP
ISL24003	18	1	4.5 to 18	35	10	180	11.5	44 Ld QFN
EL5128	1	2	4.5 to 18	12	12	120	1.5	10 Ld MSOP
EL5224	8	1	4.5 to 18	1.2	12	160	5.8	24 Ld HTSSOP, 24 Ld QFN
EL5324	10	1	4.5 to 18	1.2	12	160	7	28 Ld HTSSOP, 32 Ld QFN
EL5424	12	1	4.5 to 18	1.2	12	160	8.2	32 Ld QFN
EL5524	4	1	4.5 to 18	60	12	140	4.9	14 Ld HTSSOP
EL5624	6	1	4.5 to 18	60	12	140	6.1	20 Ld HTSSOP
EL5724	8	1	4.5 to 18	60	12	140	7.3	24 Ld HTSSOP
EL5824	10	1	4.5 to 18	60	12	140	8.5	28 Ld HTSSOP

Integrated DC/DC Regulators

Device	Input Voltage (V)	V _{BOOST} (V)	FET Size (A)	V _{ON} (V)	V _{OFF} (V)	V _{LOGIC} (V)	# of V _{COM}	# of Gamma	Features	Package
EL7515	1.8 to 13.2	4.5 to 17	1.4	N/A	N/A	N/A	N/A	N/A	Adjustable frequency, Adjustable softstart, low battery test/indicator	10 Ld MSOP
EL7520	3 to 5.5	5.5 to 20	Ext FET	5 to 32	-15 to 0	1.2 to 3.3	N/A	N/A	Start-up sequencing (inc. V _{LOGIC}), fault protection	20 Ld QFN
EL7520A	3 to 5.5	5.5 to 20	Ext FET	5 to 32	-15 to 0	1.2 to 3.3	N/A	N/A	Start-up sequencing (exc. V _{LOGIC}), fault protection	20 Ld QFN
EL7581	2.7 to 14	5 to 17	2.75	5 to 40	-40 to 0	N/A	N/A	N/A	Adjustable frequency, adjustable soft-start	20 Ld HTSSOP
EL7583	2.7 to 14	5 to 17	1.75	5 to 40	-40 to 0	N/A	N/A	N/A	Adjustable frequency, adjustable soft-start	20 Ld HTSSOP, 20 Ld TSSOP
EL7584	2.7 to 14	5 to 17	1.75	5 to 40	-40 to 0	N/A	1	N/A	Adjustable frequency, adjustable soft-start	24 Ld TSSOP
EL7585	3 to 5.5	5.5 to 20	3.5	5 to 32	-15 to 0	1.2 to 3.3	N/A	N/A	Start-up sequencing (inc. V _{LOGIC}), fault protection	20 Ld QFN
EL7585A	3 to 5.5	5.5 to 20	3.5	5 to 32	-15 to 0	1.2 to 3.3	N/A	N/A	Start-up sequencing (exc. V _{LOGIC}), fault protection	20 Ld QFN
EL7586	3 to 5.5	5.5 to 20	2	5 to 32	-15 to 0	1.2 to 3.3	N/A	N/A	Start-up sequencing (inc. V _{LOGIC}), fault protection	20 Ld QFN
EL7586A	3 to 5.5	5.5 to 20	2	5 to 32	-15 to 0	1.2 to 3.3	N/A	N/A	Start-up sequencing (exc. V _{LOGIC}), fault protection	20 Ld QFN
ISL78010	3 to 5.5	5.5 to 20	2	15 to 36	-5 to -20	1.3 to V _{DD} - 0.2	N/A	N/A		32 Ld TQFP
ISL78020	2.6 to 5.5	2.99 to 18	3	15 to 36	-25 to -5	N/A	1	0		32 Ld TQFP
ISL78022	2.6 to 5.5	2.99 to 18	3	15 to 36	-25 to -5	N/A	1	4		32 Ld TQFP
ISL97516	2.3 to 5.5	5 to 25	2	N/A	N/A	N/A	N/A	N/A	Adjustable Soft-Start, 600kHz/1.2MHz	8 Ld MSOP
ISL97519	2.3 to 5.5	5 to 25	2	N/A	N/A	N/A	N/A	N/A	Adjustable Soft-Start, 600kHz/1.2MHz	8 Ld MSOP
ISL97519A	2.3 to 5.5	5 to 25	2	N/A	N/A	N/A	N/A	N/A	Adjustable Soft-Start, 600kHz/1.2MHz	8 Ld MSOP
ISL97522	4.5 to 20	5 to 30	Ext FET	5.5 to 30	-15 to 0	1 to 3.3 Ext FET	N/A	N/A	Power sequencing, overload protection, thermal shutdown, V _{ON} slice	38 Ld QFN
ISL97642	2.6 to 5.5	3 to 18	2.8	15 to 36	-25 to -5	N/A	1	2		32 Ld TQFN
ISL97645	3 to 5.5	5 to 20	2.6	N/A	N/A	N/A	1	0	V _{ON} slice, UV and OT Protection	24 Ld QFN
ISL97645A	2.7 to 5.5	7 to 20	2.6	N/A	N/A	N/A	1	0		24 Ld QFN
ISL97646	2.7 to 5.5	8 to 20	2.6	7 to 30	N/A	2.5, 2.85, 3.3	1	0	V _{ON} slice, UV and OT Protection	24 Ld QFN T+R
ISL97650	4 to 13.2	5.5 to 20	3	5.5 to 32	-18 to 0	1 to 3.3 2A FET	N/A	N/A	Power sequencing, overload protection, thermal shutdown, V _{ON} slice	36 Ld QFN
ISL97651	4 to 5.5	5.5 to 20	4.4	5.5 to 32	-18 to 1	2 to 3.3 2A FET	N/A	N/A	Power sequencing, overload protection, thermal shutdown, V _{ON} slice	36 Ld QFN
ISL97652	8 to 15	10 to 19.5	2	5 to 34	-20 to 0	1.2 to 5.5	2	N/A	OVP, Integrated Delay FET, Dual V _{COM}	48 Ld QFN
ISL97653A	4 to 14	5.5 to 20	4.4	15 to 30	-15 to -5	1.5 to 3.3	N/A	N/A	Integrated V _{ON} Charge Pump and V _{ON} Slice Circuit, Integrated V _{OFF} Charge Pump Output, LDO Controller	40 Ld QFN
ISL97656	2.3 to 5.5	5 to 25	4	N/A	N/A	N/A	N/A	N/A		10 Ld TDFN

Device	V _{IN} (min) (V)	V _{IN} (max) (V)	V _{OUT} (min) (V)	V _{OUT} (max) (V)	I _{OUT} (max) (A)	I _q (μA)	Switching Frequency (MHz)	Peak Efficiency (%)	POR	BOM Total Footprint	Package
ISL97536	2.5	6	0.8	6	1	400	1.4	95	Y	0.15 x 0.15	10 Ld MSOP

Ambient Light Sensors Light to Current

Device	Peak Spectral Sensitivity (nm)	V _S (Max) (V)	Supply Current @ E _V = 100Lux (μA)	Lux Range (Max) (Lux)	Output Current @ E _V = 100Lux (μA)	Dark Current @ E _V = 0Lux (nA)	Rise Time (μs)	Fall Time (μs)	Delay Time, Rising Edge (μs)	Delay Time, Falling Edge (μs)	Package Dimensions (mm)	Pb-Free?	Enable Pin?	Package
EL7900	550	5.5	62	8000	62.5	0.01	105 @ 300Lux	170 @ 300Lux	165 @ 300Lux	65 @ 300Lux	2.1x2.0x0.70	Y	Y	5 Ld ODFN T+R
ISL29000	550	5.5	7.4	10000	6.5	60	27 @ 1000Lux	78 @ 1000Lux	80 @ 1000Lux	35 @ 1000Lux	2.1x2.0x0.75	Y	Y	5 Ld DFN T+R
ISL29006	550	3.6	3.5	10000	1.65	0.22	27 @ 1000Lux	233 @ 1000Lux	209 @ 1000Lux	30 @ 1000Lux	2.0x2.1x0.75	Y	Y	6 Ld ODFN T+R
ISL29007	550	3.6	3.5	10000	1.65	0.22	27 @ 1000Lux	233 @ 1000Lux	209 @ 1000Lux	30 @ 1000Lux	2.0x2.1x0.75	Y	Y	6 Ld ODFN T+R
ISL29008	550	3.6	3.5	10000	1.65	0.22	27 @ 1000Lux	233 @ 1000Lux	209 @ 1000Lux	30 @ 1000Lux	2.0x2.1x0.75	Y	N	6 Ld ODFN T+R
ISL29009	550	3.6	1.8	10000	1.6	2	20 @ 1000Lux	1290 @ 1000Lux	280 @ 1000Lux	5 @ 1000Lux	2.0x2.1x0.75	Y	Y	6 Ld ODFN T+R

Light to Digital

Device	Peak Sensitivity (nm)	V _S (Max) (V)	Supply Current (μA)	Resolution (Bits)	Lux Range (Max) (Lux)	Counts per Lux (Max) (Counts)	Dark ADC Code @ E _V = 0Lux (Max) (Count)	Gain Selection?	Output Interface	Address Selection Pins?	Enable Pin?	Package Dimensions (mm)	Package
ISL29001	550	3.63	280	15	10000	15	1	N	I ² C	N	Y	2.0x2.1x0.75	6 Ld DFN T+R
ISL29002	550	3.63	300	15	100000	1.65	1	N	I ² C	Y	N	3.0x3.0x0.70	8 Ld DFN T+R
ISL29003	550	3.63	290	16	64000	65	1	Y	I ² C	N	Software Enabled	2.0x2.1x0.75	6 Ld ODFN T+R
ISL29004	550	3.63	300	16	64000	65	1	Y	I ² C	Y	Software Enabled	3.0x3.0x0.70	8 Ld ODFN T+R
ISL29010	550	3.3	250	15	128000	20	0	Y	I ² C	Y	Software Enabled	2.1x2.0x0.75	6 Ld ODFN T+R
ISL29013	550	3.3	250	15	128000	20	0	Y	I ² C	N	Software Enabled	2.1x2.0x0.75	6 Ld ODFN T+R
ISL29020	550	3.3	50	16	64000	65	1	N	I ² C	Y	Software Enabled	2.1x2.0x0.75	6 Ld ODFN T+R

Light to Voltage

Device	Peak Spectral Sensitivity (nm)	V _S (Max) (V)	Supply Current @ E _V = 100Lux (μA)	Lux Range (Max) (Lux)	Output Voltage @ E _V = 100Lux (mV)	Dark Voltage @ E _V = 0Lux (mV)	Rise Time (μs)	Fall Time (μs)	Delay Time, Rising Edge (μs)	Delay Time, Falling Edge (μs)	Package Dimensions (mm)	Pb-Free?	Enable Pin?	Package
ISL29101	550	3.6	3.5	10000	165	1	27 @ 1000Lux	233 @ 1000Lux	209 @ 1000Lux	18 @ 1000Lux	2.0x2.1x.75	Y	N	6 Ld ODFN T+R
ISL29102	550	3.6	3.5	10000	185	20	68 @ 1000Lux	970 @ 1000Lux	145 @ 1000Lux	22 @ 1000Lux	2.0x2.1x.75	Y	N	6 Ld ODFN T+R

White LED Drivers

Device	Topologies	# of LEDs (max)	# of Chan.	Digital Interface	For LCD Size	I _{OUT} (max) (mA)	Peak Eff. (%)	V _{IN} (V)	V _{OUT} (max) (V)	Freq. (MHz)	I _{sw} (typ) (mA)	I _S (max) (mA)	I _q (max) (μA)	Integrated Diode	OVP	Fault Switch	Brightness Control	Package
EL7513	Inductor Boost	12	1	N	3.5 to 4.3	75	91	2.6 to 13.2	18	1	500	1.5	1	N	Y	N	DC or PWM	8 Ld MSOP, 8 Ld TSOT
EL7630	Inductor Boost	6	1	N	1.8 to 3.5	30	86	2.7 to 5.5	27	1.35	350	1	1	N	N	N	PWM	5 Ld TSOT, 6 Ld SC-70
ISL78100	3 to 8 High-Power LEDs in Series, Up to 32V	8	1	N	3.5 to 9	1000	90	2.7 to 16	32	1	3000	3.5	2.5	Y	Y		DC or PWM	20 Ld QFN
ISL97631	Inductor Boost	7	1	N	1.8 to 3.5	30	85	2.7 to 5.5	27	1.35	350	1	1	Y	N	N	PWM	6 Ld TSOT
ISL97632	Inductor Boost	7	1	Single Wire	1.8 to 3.5	40	85	2.7 to 5.5	27	1.4	470	1	1	Y	Y	Y	Digital 5-Bit Dimming	8 Ld TDFN T+R
ISL97634	Inductor Boost	7	1	N	1.8 to 3.5	40	85	2.7 to 5.5	27	1.4	470	1	1	Y	Y	Y	PWM up to 20kHz	8 Ld TDFN T+R
ISL97635	Inductor Boost	80	8	SMBus/I ² C*	up to 17"	280	91	6 to 24	34.5	0.6/1.2	2400	10	20	N	Y	Y	SMBus, PWM or DC	24 Ld QFN
ISL97635A	Inductor Boost	60	8	SMBus/I ² C*	up to 17"	210	91	6 to 24	34.5	0.6/1.2	2400	10	20	N	Y	Y	SMBus, PWM or DC	24 Ld QFN
ISL97636	Inductor Boost	80	8	N	up to 17"	280	91	6 to 24	34.5	1.2	2500	10	20	N	Y	Y	PWM	24 Ld QFN
ISL97636A	Inductor Boost	60	6	N	up to 17"	210	91	6 to 24	34.5	1.2	2500	10	20	N	Y	Y	PWM	24 Ld QFN
ISL97801	Inductor Boost or Buck	8	1	N	3.5 to 9	1000	90	2.7 to 16	31	1	3600	3.5	2.5	N	Y	Y	DC or PWM	20 Ld QFN

*Parts are SMBus compliant and can be used with I²C digital interface in almost all cases. Please consult product line for more information.

OLED Power ICs

Device	Topologies	I _{OUT} (max) (mA)	Peak Efficiency (%)	V _{IN} (V)	V _{OUT} (max) (V)	Frequency (MHz)	I _S (max) (mA)	I _q (max) (μA)	I _{sw} (typ) (mA)	Integrate Diode	OVP	Package
ISL97701	Inductor Boost	130	87	2.3 to 5.5	28	1	1	1	1200	Y	Y	10 Ld DFN
ISL97702	Inductor Boost	130	87	2.3 to 5.5	28	1	1	1	1200	Y	Y	10 Ld DFN

LCD and LED Display Drivers

Device	Alphanumeric?	# of Digits	Display Type	Multiplexed?	Font	Interface	Cycle Time (ns)	Package
ICM7211AM	N	4	LCD, DD	N	CODE B	MUX BCD	200	40 Ld PDIP, 44 Ld MQFP
ICM7218	N	8	LED, CA or CC	Y	CODE B, HEX	BIT PAR.,DIGIT SER.	400	28 Ld CerDIP
ICM7228	N	8	LED, CA or CC	Y	CODE B, HEX	BIT PAR.,DIGIT SER.	500	28 Ld PDIP, 28 Ld SOIC
ICM7243	Y	8 (14 or 16 segment)	LED, CC	Y	ASCII	BIT PAR.,DIGIT SER., RANDOM	250	40 Ld PDIP, 44 Ld MQFP
ICM7244	Y	8 (16 segment)	LED	Y	ASCII	BIT PAR.,DIGIT SER.,RANDOM	250	44 Ld MQFP

Level Shifters

Device	# of Devices/Channels	Output Voltage Range (V)	Continuous Output Current (mA)	Peak Output Current (mA)	Rise/Fall Times (ns)	Propagation Delay (ns)	Capacitive Load Driving (pF)	Supply Current (mA)	Temperature Range (°C)	Package
ISL24010	8	-20 to +40	10	25	150/210	250	3000	1.8	-40 to +85	20 Ld TSSOP
ISL24011	8	-20 to +40	10	25	260/290	230	5000	5	-40 to +85	20 Ld TSSOP
ISL24016	7	18	50	200	60/60	90/100	5000	9	-40 to +85	32 Ld TOFN
ISL24017	5	18	50	200	60/60	90/100	5000	9	-40 to +85	32 Ld TOFN
EL5000A	3	-30 to +40	10	100	500/750	500	5000	1.1	-20 to +85	16 Ld TSSOP

